



CivilAirPatrol Pamphlet 15(E)  
1 December 1999

# AEROSPACE Education Officers' Handbook



## T A B L E   O F   C O N T E N T S

S U B J E C T	P A G E
Introduction / General Background Information	1
Overview	2
Your Position ... Your Performance ... Your Program	4
How To Read and Use This Handbook	5
 <b>P R O G R A M S</b>	
Internal Program — Cadet Members	6
Internal Program — Senior Members	11
Aerospace Education Program For Senior Members (AEPSM)	14
External Program — Community Outreach	16
 <b>A E R O S P A C E   E D U C A T I O N   O F F I C E R - - - “ H O W - T O ”   M A T E R I A L</b>	
How To Identify Prospective Aerospace Education Officers	19
How To Develop an Aerospace Education Bulletin Board	21
How To Develop and Aerospace Education Resource Center	23
How To Develop and Conduct an Aerospace Current Events Discussion	25
How To Develop, Teach, and Evaluate an Aerospace Lesson	26
How To Develop and Evaluate an Aerospace Activity	28
How To Develop Cadet and Senior Aerospace Education Material	30
How To Make an Aerospace Presentation in a School or to a Community Group	33
How To “Do It All”	35
Quick Reference	36
 <b>A W A R D S</b>	
A. Scott Crossfield Aerospace Education Award	37
Aerospace Education Excellence Award Program [ <i>Aerospace 2000</i> ]	38
Frank G. Brewer — Civil Air Patrol Memorial Aerospace Awards	40
National Congress on Aviation and Space Education	
Crown Circle for Aerospace Education Leadership Award	44
A. Scott Crossfield Aerospace Education Teacher of the Year Award	47
 <b>R E P O R T S</b>	
Reporting Periodically to the Commander on the Unit Aerospace Education Program	51
Wing Aerospace Education Plan of Action	53
Master Suspense Schedule for Aerospace Education Officers	56
Squadron Aerospace Education Activity Report	57
Wing Aerospace Education Activity Report	61
Region Aerospace Education Activity Report	66
 <b>R E S O U R C E   S I T E S</b>	
Civil Air Patrol Region Directors of Aerospace Education	69
Civil Air Patrol National Headquarters	69
Educational Groups	70
National Aeronautics and Space Administration	70
Federal Aviation Administration	71
Resources To Explore	72

# AEROSPACE EDUCATION OFFICERS' HANDBOOK

## INTRODUCTION

Thank you for volunteering to help your unit be actively involved in Civil Air Patrol's aerospace education mission. No special credentials are required to perform the Aerospace Education Officer's (AEO) duties. You do not have to be a "rocket scientist" to do an outstanding job. All you truly need is an interest in the wonders of aerospace and the desire to promote this subject among your fellow CAP members as well as your community. This handbook will help you do the aerospace education job. It answers many of the "who, what, when, where, and how" questions. Your challenge will be to provide the energy and commitment to nurture "your" aerospace education program and create the right learning environment. This handbook will offer ideas on program development. Pick the ones that work for you and start building your program.

## GENERAL BACKGROUND INFORMATION

*Aerospace Education:* Civil Air Patrol's definition is: "Aerospace Education is that branch of general education concerned with communicating knowledge, skills, and attitudes about aerospace activities and the total impact of air and space vehicles upon society."

*Civil Air Patrol, the Corporation:* Civil Air Patrol was incorporated on July 1, 1946 by Public Law 476. Congressional members from all forty-eight states sponsored the law. Public Law 476 established Civil Air Patrol's objects and purposes as follows: "Provide an organization to encourage and aid American citizens in the contribution of their efforts, services, and resources in the **development of aviation and in the maintenance of air supremacy**, and to encourage and develop by example the voluntary contribution of private citizens to the public welfare. **Provide aviation education and training** especially to its senior and cadet members; to **encourage and foster civil aviation in local communities** and to provide an organization of private citizens with adequate facilities to assist in meeting local and national emergencies."

*Civil Air Patrol, the Official Auxiliary of the United States Air Force:* Civil Air Patrol became the official auxiliary of the Air Force in 1948. Civil Air Patrol works in a volunteer status for the United States Air Force. CAP conducts search and rescue, disaster relief, cadet programs, and aerospace education in support of the United States and the United States Air Force. As the "official auxiliary" CAP has a special responsibility to present a professional and positive image in every situation because we are by extension representing the United States Air Force. As an AEO, each time you prepare, present, or promote aerospace education programs you should keep this special responsibility in mind.

*Volunteer* -- "One who serves or acts of his or her own free will; one who gives help, does a service or takes an obligation voluntarily." Civil Air Patrol is a volunteer organization. Because volunteerism is at the very essence of Civil Air Patrol, every project or program undertaken requires individuals to participate of their own free will, taking the obligation freely. In aerospace education, always create a climate in which individuals feel welcome, cared for and rewarded for their volunteer spirit. In a positive environment volunteers will serve, act, and accept obligations.

*Core Values:* Civil Air Patrol has four core values. They are **Integrity, Volunteer Service Excellence, and Respect**. These are the yardsticks to use in all aspects of the aerospace education program. Every endeavor, work assignment or activity should be measured against these values. If any endeavor fails the test, then either modify the effort to meet the values or do not proceed. Why? Because by using these values as standards you will always be working to do the right things for the right reasons and that will make the Civil Air Patrol aerospace education program work the right way.

## OVERVIEW

Civil Air Patrol has Internal and External Aerospace Education programs. The **Internal Program** has two parts: Cadets and Seniors.

Cadets have a mandatory aerospace education program. They must learn about aerospace education to progress in Civil Air Patrol. The governing regulation for Cadet aerospace education is CAPR 52-16, *Cadet Program Management*. Cadets must pass formal tests to progress in the achievement levels and in the awards system. Cadets are presented with aerospace education opportunities as part of squadron meetings, encampments and field trips, and through guest speakers, model building, and flying. As the AEO, you need to know what cadets need to do as they discover that aerospace education is a fun, esteem-building experience. Your partners in the Cadet aerospace education program are the unit commander, the cadet program leaders, the cadets and any other senior member or expert from outside CAP who can assist with aerospace education.

Seniors have an elective aerospace education program. The publications containing information on aerospace education for senior members are CAPR 50-17, *CAP Senior Member Training Program*; CAPR 280-2, *CAP Aerospace Education Mission*; and CAPP 215, *AEO - 215 Specialty Track Study Guide*. Seniors may participate in the Aerospace Education Program for Senior Members (AEPSM) and earn the Charles E. 'Chuck' Yeager Aerospace Education Achievement Award (see CAPR 280-2). Seniors may earn the "Technician," "Senior," or "Master" ratings in the 215 Aerospace Education Officer Specialty Training Track (see CAPP 215). Seniors may use attendance at a National Congress on Aviation and Space Education, attendance at a Region Aerospace Education Conference or preparing an aerospace manuscript for publication, to fulfill certain Senior Member Training Program progression requirements (see CAPR 50-17).

The **External Program** is community outreach. The objective, as specified in CAP's 1946 Congressional charter, is to "... encourage and foster civil aviation in local communities." In later years, the words "civil aviation" changed to "aerospace education." CAP has focused on schools and teachers as an excellent way to promote aerospace. Teachers can use aerospace themes and experiences to excite students, to teach a variety of subjects, and to develop special activities such as field trips, science competitions, model building, art contests, science fairs, etc. And, it is an excellent way to expose students to aerospace career opportunities.

An important part of CAP's external program is the **Aerospace Education Member (AEM) Program**. This program is designed primarily for teachers from kindergarten through twelfth grade who want to promote aerospace education in their schools using CAP educational products and resources. For their \$30 annual membership dues, AEMs receive a membership certificate, lapel pin, periodic newsletters, special educational products, the opportunity to participate in CAP's Middle School AE Program, etc. Also, if military airlift is available, AEMs receive priority seating on aircraft traveling to CAP's National Congress on Aviation and Space Education. Because AEMs are restricted from regular participation in CAP unit activities, they are not required to be FBI screened or to complete Cadet Protection Training. AEMs who transfer to regular membership status (and many of them do), may transfer without charge and complete the screening and training requirements for regular membership. As an AEO, you are encouraged to personally promote this program in local schools and to encourage CAP cadet and senior members to recruit a teacher for CAP. AEM recruiting brochures are available from your Region Director of Aerospace Education (RDAE). In addition, NHQ CAP/ET issues a Letter of Appreciation and a CAPC 36, *Certificate of Appreciation*, to any cadet or senior member who recruits an AEM. This letter and certificate is sent to the individual's unit commander for an appropriate presentation when a short letter of request is sent to NHQ CAP/ET by the unit AEO.

Beyond the school system there are many other places for CAP to promote aerospace education in the community. There are community service organizations such as Boys Clubs, Girls Clubs, Rotary, Kiwanis, Modeler Clubs, Hobby Shops, Environmental Clubs, Art Associations, 4-H, etc. Through service organizations such as these, plus business organizations, aerospace organizations, and aerospace industry, CAP has worked to promote the importance and usefulness of aerospace education. In May 1998, CAP's National Executive Committee modified the AEM program to allow reputable organizations to join CAP and for a designated individual in that organization to receive the AEM membership benefits. Since then, many schools have used other organization's funding to join CAP as an AEM, thereby allowing their entire school to enjoy AEM benefits via their designated representative. A new CAPF 13, *CAP AEM Membership Application*, accommodates these organizational applicants. Also, businesses may either join CAP as an AEM or sponsor one or more teachers to be AEMs. Again, any CAP cadet or senior member who recruits an AEM in these special categories will be issued a Letter of Appreciation and a Certificate of Appreciation through their unit commander. Further information on the AEM program can be found in this handbook under the section entitled: "External Program--Community Outreach."

The *Graf Zeppelin* was one of the most successful of the rigid airships. In the 10 years that it flew, the airship made 590 flights carrying a total of 13,110 passengers. Launched in 1928, it flew more than one million miles before being retired in 1939. Making a successful round-the-world flight in 1929, the fame of the airship was dwarfed only the fame of its sister airship, the *Hindenberg* -- primarily remembered for its fiery and spectacular end at Lakehurst, New Jersey in 1937 where it was ripped by an explosion as it prepared for mooring. Fire raced through the airship and it crashed to the ground in flames. The crash of the *Hindenberg* signaled the end of the era of the passenger airships.



## YOUR POSITION...YOUR PERFORMANCE... YOUR PROGRAM

**POSITION:** Aerospace Education Officers (AEOs) serve at all organizational levels from squadron through region. When you accept assignment as AEO on the Commander's staff, you accept responsibility for learning, knowing, and helping do aerospace education in your unit. The aerospace education program is not passive. It is active. AEOs provide the stimulus.

At the squadron level you stand alone serving cadets or serving seniors. You must learn the program and make it work. The squadron commander and fellow squadron members are counting on you. The members, cadets or seniors, respond to your leadership and do the aerospace achievements, activities, or events and earn the awards. The community gets as much aerospace education outreach as your activity and leadership produces.

At the group, wing or region level you serve on an aerospace education staff team. Your commander looks to you for information concerning requirements and performance in the aerospace education program. The commander may seek advice and counsel concerning aerospace education program goals and standards for the unit. Absolute candor in what you report and recommend is the only way a commander can support you and aerospace education in the unit. You may be asked to help subordinate units or higher headquarters. Success requires your best ideas and highest energy levels. Outreach into the community involves finding allies and networking with them.

**PERFORMANCE:** Aerospace Education Officers have a requirement to learn and act.

**Learn.** You must learn the regulations, the reports, the procedures, and the processes required to do the job. You must document the aerospace education program. You must learn to inspire and instruct others as you instill aerospace knowledge. You must learn patience as you build an enduring aerospace education program.

**Act.** You must lead by doing. Your interest, activity, and enthusiasm with cadets, seniors, and the public are essential in making the aerospace education program work. Your example should cause CAP members and the public to be willing to act to support you and the aerospace education program you are promoting.

**PROGRAM:** An Aerospace Education program has goals, plans and action to meet the goals and a review process.

Who makes the goals? Many CAP aerospace education goals are defined in CAP regulations and manuals. You and other CAP members or people outside of CAP may also propose aerospace education goals. These goals are considered and approved by the commander for implementation. You then publicize the unit's aerospace education goals.

Who develops the plans to achieve the goals? You do. You may need help developing the plans to reach the goals because you lack expertise or experience. Find and enlist the help you need from within your unit or community. Developing plans and processes to achieve your goals in aerospace education is essential to success. But, remember that you need the commander's approval to start.

Who does the action? Often there are two categories of action required. One category consists of

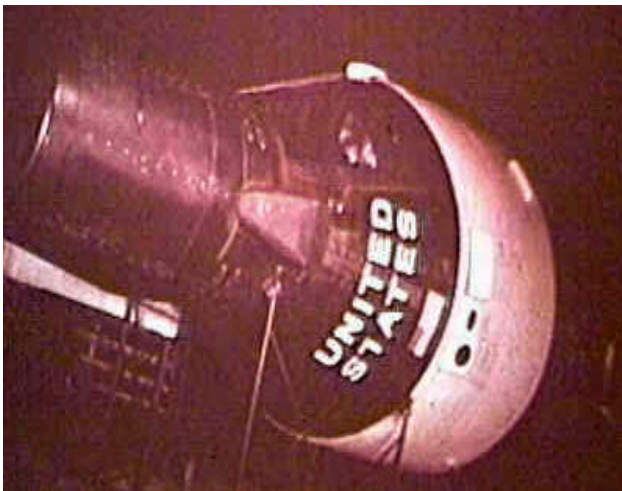


leadership, guidance, training, support, evaluation, and reporting. The AEO normally performs these tasks. You are in full control of this action. The CAP members or the external groups who participate in the aerospace education program carry out the other category of action. For these actions you may or may not have control depending on your leadership ability. Your leadership will make the difference in whether or not they want to act.

Who evaluates? You do. It is your program. You inform the commander of the results of the evaluation. And consider what happens next. Do you continue, change or stop? That is the essence of any aerospace education program. Remember, as the Aerospace Education Officer you should always be at the center of the program. The commander needs to be your strongest ally. And lastly, the program works when you can get people to act in support of the goals.

## HOW TO READ AND USE THIS HANDBOOK

In this handbook there is some general information. The general information is important. There is more specific information about how to conduct the internal and external aerospace education programs. This information is organized to serve as a step-by-step guide, a review, or an evaluation checklist. There is specific information about AEO staffing and duties for all levels, squadron to region. This information is organized in a task-oriented sequence so you can know what you are responsible for accomplishing and where your position fits in the overall CAP aerospace education program. This handbook uses ideas, tips, philosophies, strategies, and tactics that have proven effective in performing the aerospace education mission. Read this information and consider what will work in your situation. Then make your plans and implement them to the best of your ability. Reading this handbook is the **easy** part. Achieving is the rewarding part for you and for those who receive the benefit of your labor and leadership.



The early days of the space program in the United States found astronauts traveling into space and working in Earth orbit in capsules such as these. Capsules were not reusable, and many of them are on display at various museums throughout the country. The "lost" *Liberty Bell* space capsule from the second suborbital Mercury flight, made by astronaut Virgil I. "Gus" Grissom, has recently been located and retrieved from the ocean where it sank more than thirty years ago when the capsule's hatch blew prematurely and the capsule filled with water. Grissom was rescued from the ocean and went on to fly

in the Gemini program where he became the first astronaut to change the orbit of a spacecraft. Chosen to be the commander of the first three-man Apollo flight, he was killed in the launch pad fire at Cape Kennedy that claimed the lives of the three Apollo 1 astronauts on 27 January 1967.

## I N T E R N A L   P R O G R A M   –   C a d e t   M e m b e r s

First, the facts:

- ★ CAP commanders are responsible for leading the cadet program staff in conducting the overall program in accordance with CAPR 52-16.
- ★ Aerospace education for cadets is a combined self-study and group-study program. Instructors should conduct classes and group study sessions that support the cadets' self study (reference CAPR 52-16).
- ★ Each cadet in Phase I and II should be assigned an aerospace education mentor. Senior members, Cadet Sponsor Members, and Phase III or IV cadets should be identified and used to act as aerospace mentors. Starting with achievement eight, the cadets must serve as an aerospace education mentor to cadets studying their Phase I or II aerospace materials. Mentors should take an active responsibility for the individual cadet's success (reference CAPR CAPP 52-6, *Cadet Programs - Mentoring*).
- ★ Aerospace education chapter tests do not have to be taken sequentially, but all tests must be taken. Once passed, the tests must be corrected to 100% by going over the questions missed with the cadet and the mentors. Records should indicate what the cadet originally scored to evaluate the cadet's on going performance (reference CAPR 52-16, paragraph 2-4e).
- ★ Comprehensive aerospace education tests are given for the Mitchell, Earhart, and Spaatz Award process (reference CAPR 52-16).
- ★ Phase IV cadets instruct in aerospace education in their squadron and have the opportunity to serve as the squadron Cadet Aerospace Education Officer (reference CAPR 52-16).
- ★ Squadron commanders will provide opportunities for cadets to test for their achievements at least every 30 days (reference CAPR 52-16, paragraph 2-3j)
- ★ Achievements require a minimum 60-day separation between completion of each of the achievements.
- ★ Unit commanders may reproduce a reasonable number of aerospace education test booklets and answer keys as long as test control procedures found in CAPR 50-4 are followed (reference CAPR 52-16 and CAPR 50-4, *Test Administration and Security*).
- ★ Aerospace education is a required part of each cadet encampment (reference CAPR 52-16).
- ★ CAP cadets 17 or younger are authorized to participate in the flight orientation program (nine flights – five front seat and four back seat -- are reimbursable) to become exposed to general aviation (reference CAPR 52-16). Refer to CAPF 77, *Cadet Flight Orientation Program Syllabus* for the specifics on each flight. The Aerospace Education Officer and the orientation pilot should work as a team to implement this program.

Now, some remarks.

Although the cadets in the unit are responsible for doing aerospace education, you are responsible for helping. Sometimes this means standing back and letting cadets work. Sometimes it means



intervening when you can see things are not working. And, sometimes, it means taking charge when things are not getting done. Your AEO job is not passive. It is an active, participating, helping job.

Cadet aerospace education is an active process. In every cadet and composite unit aerospace activities are to occur every month as part of the cadet learning process. Phase III and IV cadets will mentor and instruct Phase I and Phase II cadets. Every 2 months the squadron will “do” the activities in one of the six achievements in Phases I and II of aerospace education in the Cadet Program. Like the cycle of seasons in a year, every cadet will work in all six aerospace areas (Aerospace Applications and Principles, Air Environment, Aircraft, Rockets, Space Environment, Space Vehicles) every year and will share knowledge and skills in a group context with all the other cadets in the squadron. Cadets will work as a group doing activities and studying together to pass aerospace education achievement tests in Phases I and II. Cadets in Phases III and IV will study an advanced aerospace text and will be tested on aerospace chapters to progress. They will use their expanded knowledge as they mentor and instruct other cadets.

The intent of the cadet aerospace education process is to foster teamwork through hands-on learning and to increase self-esteem as practical leadership experience is provided. How should the program work? In Phases I and II, the written aerospace education material is foundational and the experiments demonstrate the principles discussed in the written material. Each cadet reads the material. Then, all the cadets do the experiments — junior cadets receive help (mentoring) from senior cadets who have previously done the experiments and receive instruction on the experiments and the material from other senior cadets (the instructors). This promotes group sharing, simultaneous involvement by all cadets in the same material, and a group stake in the success of the activity. When it is test time (every 2 months in a new aerospace achievement area) everyone has a stake in successfully passing the test. Everyone can help each other prepare, as they are all studying, teaching, mentoring in the same aerospace achievement area. For senior members guiding the cadet or composite squadron, the task becomes much simpler. As the squadron plans its schedule for the year, aerospace education can be block scheduled in two-month increments. The blocks can be harmonized with related aerospace events — such as encampments, orientation flights, and with guest speakers and field trips which support the subjects and material in the aerospace achievement area. Testing can be scheduled a month or more in advance so all cadets can have ample time to study, individually and as a group. Experiments and activities can be planned well in advance so materials will be available and instructors prepared. Requiring senior cadets to mentor and later instruct means these senior cadets must master the material. It offers senior cadets the opportunity to lead by demonstrating personal aerospace proficiency and to set the example for other cadets. It requires these senior cadets to develop teaching and team leadership skills. This is the essential ingredient that makes the senior cadets better role models for the junior cadets.

As the Aerospace Education Officer, your job is to facilitate the conduct of the cadet aerospace education program. When there are no senior cadets to act as instructors or mentors, your job is to find an instructor, do mentoring, and guide the process until the unit has senior cadets to carry the load. When encampments and orientation flights are being planned, your job is to ensure aerospace education is integrated into the activity so cadets can clearly see the relationship between “knowing aerospace information” and “applying aerospace knowledge” to practical activities. When cadets falter, carry them forward with aerospace activities and experiences which uplift their spirits, create strong self esteem, and show them that the skills they are learning can fill their work or leisure life. Flying is fun. Talking on the radio is exciting. Navigating by map and compass is a new experience. Firing rockets is thrilling. All these areas are career opportunities, too. Help the cadets make the connections. Harness their passion for interesting, fun aerospace

activities with pursuing the life's work they must eventually find. As an aerospace education officer, you are the adult who makes aerospace education relevant to young people who know what they like, but don't yet know how to harness their likes into their lifetime use. Being able to learn, being able to mentor, being able to instruct competently qualifies any cadet, any young person, for good jobs and good career opportunities.

And, some details:

**Planning:** The cadet staff, with senior guidance, plans the meeting programs and then does the program. As the AEO, you are the commander's representative for aerospace education. You must ask all the hard questions (What are we doing for aerospace education at this meeting? Do we have an instructor? Do we have the materials for the activity? Have we allotted enough time?). You must make sure the plan is carried out. You must evaluate the performance and provide feedback so everyone's performance continually improves. Your objective is to ensure that when cadets do aerospace education they are successful and feel good about their accomplishments.

**Support:** Occasionally there is a difference between the aerospace education the cadets plan to carry out and their capability to accomplish the plan. If they are missing an instructor, it is your job to help them find one. If they need transport or chaperons to make the aerospace education field trip to the airport or museum, it is your job to help get the needed resources. You are the person responsible for facilitating success by making sure resources meet requirements. This is a creative task but one that will be very rewarding when you do it successfully.

**Testing:** Cadets want to succeed. However, many cadets fear testing – creating stress and many potential negatives for both the individual cadet and the unit. The cadet aerospace education program is designed so all cadets spend 2 months working on one aerospace education achievement and all Phase I and II cadets test in that achievement at the same time. This makes group study and group coaching possible. You should encourage scheduling of group reviews. Overcome cadet fear by creating a process and environment where most cadets pass their examinations the first time. After every test, recognize the successful cadets and conduct a test review that identifies all questions missed and the correct answers. This review process is needed so cadets can pass the comprehensive test later. Most importantly, counsel cadets who did not pass the test to determine what remedial instruction needs to be given and when the cadet will be prepared to test again. Both you and your squadron commander should understand that the successful pass rate of your cadets reflects on your combined leadership in getting the aerospace education learning accomplished. So, prepare them well, correct their test mistakes so they will have reinforced the "correct" answers, and make aerospace education a success for the cadets.

**Integration:** Cadets need "out-of-unit" activities like encampments and flight orientation rides to relate back to the basic cadet aerospace education they received in the unit. An aircraft preflight walk around is a study of the parts of an aircraft and how they work. That should be tied back to previous or upcoming study of aircraft in the aerospace education program. The presentation on air power given by the Air Force at an encampment should be related back to "the role of air and space vehicles in our society." You, as the AEO, must present the connection before the cadets start an encampment or flight orientation and reinforce the connection during or after the activity. As the adult, you are creating the "big picture" in the young minds of our future air power advocates. Further, you, as the AEO, should interact with the person or people presenting the material at the encampment or flight orientation to ensure these presenters make the connection to cadet aerospace education which should occur in the unit year-round.

## The Cadet Aerospace Education Program

What Is It?:

A component of the overall program for cadet members of Civil Air Patrol.

Who Does It?

The unit Aerospace Education Officer or (in composite squadrons) the Aerospace Education Officer for Cadets. This individual works with the Commander, the Deputy Commander for Cadets, and the Activities officer to ensure implementation of the program in the unit.

Components:

### Phase I

**Aerospace Current Events** discussion conducted as part of weekly meetings. All unit members participate. All cadets should be involved with **Aerospace 2000** activities conducted in the unit, with **enrichment activities** conducted by the unit, or with **guest speaker programs**. Additionally, **Achievements two and three of this phase contain a specific aerospace education program requirement**, which is based on the cadet textbook and must be completed for this phase.

### Phase II

**Aerospace Current Events** discussion conducted as part of weekly meetings. All unit members participate. All cadets should be involved with **Aerospace 2000** activities conducted in the unit, with **enrichment activities** conducted by the unit, or with **guest speaker programs**. Cadets are also required to **complete five achievements**, four of which have an aerospace education component based on the cadet textbook. The **General Billy Mitchell Award**, which includes a comprehensive aerospace / leadership examination, completes this phase.

### Phase III

**Aerospace Current Events** discussion conducted as part of weekly meetings. All unit members participate. All cadets should be involved with **Aerospace 2000** activities conducted in the unit, with **enrichment activities** conducted by the unit, or with **guest speaker programs**. Cadets are also required to **complete three achievements**, each of which requires completion and review testing for two chapters of the cadet textbook. Cadets in this phase will **serve as mentors and assistant instructors** for the Phase II cadets and will continue to **study the aerospace textbook** on their own. The **Amelia Earhart Award**, which includes a comprehensive aerospace / leadership examination, completes this phase.

### Phase IV

**Aerospace Current Events** discussion conducted as part of weekly meetings. All unit members participate. All cadets should be involved with **Aerospace 2000** activities conducted in the unit, with **enrichment activities** conducted by the unit, or with **guest speaker programs**. Cadets are also required to **complete five achievements**, one of which involves preparing a **Staff Duty Analysis** for the Aerospace Education Officer position in the squadron. Cadets in this phase **serve as aerospace education counselors and instructors** to Phase II cadets and continue to

**study the aerospace textbook** on their own; three of the five achievements in this level require completion and review testing for two chapters of the cadet textbook. Cadets in this phase should hold cadet officer level staff positions, one of which may be the Cadet Aerospace Education Officer. The **General Ira C. Eaker Award**, which requires a leadership essay and speech as well as attendance at Cadet Officer School, Region Cadet Leadership School, or completion of ECI 13, completes this phase.

### **Encampment**

Cadet participants in the encampment program are Phase I and II cadets. Phase III and IV cadets may serve as cadet staff officers. [An encampment is required for completion of Phase II.] The Encampment course content includes a 2-hour block devoted to **Aerospace Education** as part of the program.

### **Orientation Flights**

Cadets who are 17 or younger may participate in this program, which is designed to introduce the cadet to general aviation flight operations. The program consists of **nine separate flights**, each with its own syllabus. Refer to CAPF 77 for details.

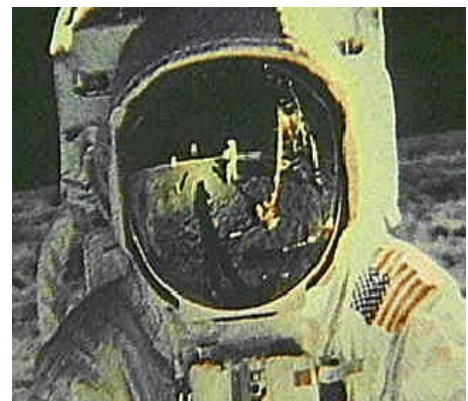
### **General Carl A. Spaatz Award**

Cadets who have completed all achievements in the cadet program are eligible to take the Spaatz examination. The exam, administered by the Liaison Officer, includes a comprehensive aerospace test based on the cadet textbook.

### **NOTE:**

**Enrichment activities** may include such things as flight training, ground schools, observer training, orientation flights, simulator flights, model building and competitions, tours of airports, FBOs, FAA facilities, Air Force installations, museums, aerospace industries, and planetarium programs and visits.

Did you know that there are no still photographs of astronaut Neil Armstrong walking on the moon? Although he was the first man to set foot on the lunar surface, he was also the astronaut with the camera -- and he took all the photographs! This famous shot shows the lunar landing area reflected in Edwin "Buzz" Aldrin's faceplate and, if you look closely, you can see the reflection of Neil Armstrong in the center of the faceplate as he takes the photograph.



## I N T E R N A L   P R O G R A M   –   S e n i o r   M e m b e r s

First, the facts:

- ★ CAP senior members are obligated to involve themselves in aerospace education (reference CAPR 280-2).
- ★ All CAP units have one or more aerospace education officer positions to fill (reference CAPM 20-1, *Organization of Civil Air Patrol*). When a CAP member is assigned to fill the duty position of aerospace education officer, the member must enroll in specialty track 215 of the Senior Member Training Program, unless the member already holds an aerospace education specialty rating (reference CAPR 35-1, *Assignment and Duty Status*).
- ★ The 215 Aerospace Education Officer Specialty Track is the leadership program for aerospace education in Civil Air Patrol. CAP senior members may voluntarily elect to participate in the 215 Aerospace Education Officer Specialty Track and earn “Technician,” “Senior,” and “Master” ratings (reference CAPP 215). Achieving the 215 Master rating earns the A. Scott Crossfield Award. The application form for this is CAPF 2a, *Request for and Approval of Personnel Actions*.
- ★ CAP senior members may voluntarily do a self-paced, self-study program (Aerospace Education Program for Senior Members [AEPSM]) and earn the Charles E. “Chuck” Yeager Aerospace Education Achievement Award (reference CAPR 280-2). Completing the AEPSM in conjunction with Level II of the Senior Member Training Program earns a gold “Aerospace Education Award” seal on the Certificate of Proficiency (COP). The application form for the COP and the special seal is CAPF 24, *Application for Senior Program Awards*.
- ★ CAP senior members may use some aerospace education activities as criteria for completion of Levels II, III, or IV of the Senior Member Training Program (reference CAPR 50-17).

Now, some remarks.

A senior member may view the aerospace education program in several ways. One way is as an individual. Individuals do the things that reward them, i.e., earning the Yeager Award and the Crossfield Award. Another way of viewing aerospace education is from a leadership perspective. Leaders accept aerospace education duties and/or a staff position by serving as an Aerospace Education Officer in a unit, as a mentor in aerospace education in a cadet or senior squadron, and as an outreach facilitator for aerospace education in the community. Another way of viewing aerospace education is from a team player perspective. When aerospace education is being planned or is taking place, team players fill the support role in the unit and the community. Regardless of how one views aerospace education, there’s a way for all senior members to participate.

Effective leadership can influence how senior members perceive aerospace education. Fun, interesting, rewarding experiences create a positive environment. Remembering there are many different ways individuals can look at the aerospace education program, assess your audience and start the aerospace education experience with the most fun, most rewarding, most interesting events. As an example, if you have a composite squadron and the seniors are indifferent towards aerospace education, try getting them to start “hangar flying.” Shared stories and experiences wrapped up with a session on “lessons learned” can help the members understand that aerospace education is not just books, classrooms, and tests. Aerospace education deals with the knowledge gained from sharing. The “hangar talk” or “bull sessions” can educate young and old alike.

Assessing available “people resources” will help determine what type of aerospace education program can be developed. If you have willing leaders, lots of team players, an active, energetic environment, then aerospace education can be easy. Always remember: the basic CAP responsibility for seniors is to be informed and to be involved. The simplest way of doing that is for them to share what they know with others. Energize the program--look for a leader or become the leader yourself. Look for the team players for aerospace education. Empower them to offer ideas for activities and programs. Help them carry them out. Reward them with public praise. Supporting resources are all around you. Use your imagination. The nightly news, the local airport, a library or museum, an interesting person, a school, a weather station, a factory, the local auto repair shop all can be resources. How? The weather station can teach about fronts, clouds, air pressure and density, weather patterns and why you have the weather you have in the local area – the air environment. The local auto shop can teach fuel injection or carburetion and how fuel air mixture effects propulsion in reciprocating engines. The local factory may show construction techniques or instrumentation calibration. The point here is that there is a vast array resources that you can find and use.

Developing in-house resource and information centers is important to getting senior members involved in aerospace education. Continually search for ideas to help develop information and resource centers. For example, the Aerospace Education Program for Senior Members requires a senior member to purchase a 500-page book, do the review exercises, and pass the test. The book costs about \$17.00. There is an instructor guide for a senior member to use in instructing other senior members. The Instructor Guide costs about \$3.00. To help build a unit resource center, ask members who have completed the program to donate their book. Then have the unit buy the instructor guide. All that’s left is to find a senior member who will instruct other interested senior members. Now you have the resources - the book(s) for members to borrow, an instructor with an Instructor guide, a group process for your senior members to learn, pass the test, and earn the AEPSM award. Moreover, the tools (the book and instructor guide) are now available to use when teaching a class on weather, navigation, aviation history, rocketry or a host of other subjects. You have saved money for the members, made an aerospace education program easily accessible and started the process of collecting resources to do aerospace educating. Expand this concept to other books, videos, models, and knowledgeable instructors and you’ll find your resources will become a multifaceted way to present aerospace information. Another example of a tried and successful method to promote aerospace education is to develop an aerospace bulletin board. Most aerospace education officers find that an attractive and interesting bulletin board is a great way to convey information through a very inexpensive resource. Post the aerospace education goals for the unit. Post the upcoming activities. Post your needs for help. Post interesting pictures and news that informs or inspires. Post award winners. Post dates to submit people for awards. You have to use every available medium to get the information out regarding aerospace education goals and activities. But, until you start collecting and sharing tools, you won’t have the resources to build your program. Every member who shares a resource –books, videos, knowledge, or time is helping your aerospace education program. Give thanks to them and prepare an index of these “people” resources so you can refer to it whenever there is a need or opportunity.

Getting a visible reward for promoting aerospace education can serve as an excellent motivator. The Aerospace Education Excellence Award program is specifically designed to get a CAP unit (from squadron level to region level), to commit to doing fun, interesting aerospace activities. The National Headquarters AE staff has produced numerous volumes of activities from which to choose. By doing the activities, the unit bonds as a group, gains some skill or information which is useful in understanding aerospace, and, is reminded that understanding and promoting aerospace is part of the Civil Air Patrol mission. The reward for participating in this program is a magnificent plaque to display, plus recognition in the *Civil Air Patrol News*. Start your aerospace education program by getting your commander to agree to support the Aerospace Education Excellence Award program. Involve the unit members in picking the activities to accomplish as a group. Work hard to make the activities go well. Then, use the momentum of success to build a bigger aerospace program and legitimize your claim for future support from the unit and the members.

## **The Senior Member Aerospace Education Program**

### **What Is It?:**

A component of the overall program for senior members of Civil Air Patrol.

### **Who Does It?**

The unit Aerospace Education Officer or (in composite squadrons) the Aerospace Education Officer for Senior Members. This individual works with the Commander, the Deputy Commander, and the Activities officer to ensure implementation of the program in the unit.

### **Components:**

#### **Aerospace Education Program for Senior Members [AEPsM]**

A voluntary aerospace program based on the textbook *Aerospace: The Challenge*. Members read and study the text and complete a 100-question evaluation to earn the Charles E. "Chuck" Yeager Award. The program may be completed individually or through a unit study program that may include guest speakers, informal instruction, or other educational support.

#### **Aerospace Current Events**

A ten-minute [minimum] segment of the weekly meeting devoted to a discussion of aerospace current events. All unit members participate; the discussion may be led by the Aerospace Education Officer, by a Phase III or IV cadet, or by volunteers. It may focus on recent news articles, on items displayed on the unit Aerospace Education bulletin board, or in any other fashion as determined by the unit.

#### **Aerospace 2000**

A program designed to involve all members of the unit in hands-on aerospace activities; participation by the unit is voluntary. Unit Commanders and Aerospace Education Officers jointly sign the unit agreement of participation; the Aerospace Education Officer conducts the program. Units completing one monthly aerospace activity from the five-volume *Aerospace 2000* materials earn a plaque for the unit; individual certificates of completion are also available for unit members.

#### **Level II Aerospace Education Officer Specialty Track**

The 215 specialty track is divided into three ratings: Technician, Senior, and Master -- each with its own specific requirements for completion of the rating. Requirements include knowledge, study, and experience as delineated in the specialty track pamphlet. Senior members choosing to complete the specialty track should follow the requirements as listed in Pamphlet 215. In addition, members who complete the master rating are eligible to receive the A. Scott Crossfield Aerospace Education Award.

#### **Individual Aerospace Education and Outreach**

Each member has a personal obligation to sustain a level of aerospace knowledge that will ensure a strong professional organization. Members can read professional magazines, journals, and books as well as keeping up with current events. Additionally, it is the responsibility of all senior members to promote aerospace education within CAP and in their communities.



## **Aerospace Education Program for Senior Members (AEPSM)**

### **What Is It?**

A voluntary aerospace education program for Civil Air Patrol senior members. Basically, their task is to read *Aerospace: The Challenge* textbook, pass a test on the material, and receive the "Yeager" award certificate.

### **Who May Participate?**

Any regular CAP senior member

(no Aerospace Education Members, no retired CAP members, and no CAP cadets).

### **Why Participate?**

This is an informational program about aviation and space. It meets part of a senior member's requirement to be informed on aerospace developments and issues.

### **Materials Required:**

#### **For the Student:**

*Aerospace: The Challenge* textbook (includes study guide)

#### **For the AEO:**

*Aerospace: The Challenge* and instructor guide

AEPSM: AEE Examination Code 19891 and 19892 with answer sheets

CAPF 23 – CAP General Purpose Answer Sheet

CAPF 124 – AEPSM AE Examination Control Log

CAPF 126 – Unit AE Examination Administration Record and Report Form

#### **For the Wing DAE:**

CAPF 127 – Monthly Certification Report

CAPC 20 – Charles E. "Chuck" Yeager Aerospace Education Achievement Award

### **Procedure:**

Member studies textbook at home, comes to unit and takes test; **OR**, unit holds study session(s), study group members take the test at unit; **OR**, Individual members or groups take test at wing or region conference, if offered. NOTE: **No take home examinations.**

### **Test Administration:**

Test given by Aerospace Education Officer **who has completed AEPSM.**

### **Step-by-Step Process for the AEO:**

- ☐ **Find out members in unit who have not completed AEPSM (consult the Monthly Membership Listing).**
- ☐ **Find out members in unit who currently wish to complete AEPSM.**
- ☐ **Determine members' desires:**
  - \_\_\_\_\_ study group (requires scheduling and leader) **OR**
  - \_\_\_\_\_ individual self-study preparation
- ☐ **Gather materials (for AEO support of AEPSM program):**
  - \_\_\_\_\_ Order Textbook and Instructor Guide from Civil Air Patrol Bookstore.
  - \_\_\_\_\_ Order test packet [test booklets, answer keys, applicable forms, and instructions] from Wing DAE using CAPF 123, *Unit Request for AEPSM AE Examination Package.*

NOTE: Both the Unit Aerospace Education Officer and the Commander must sign the request form.  
— Order CAPF 23 from NHQ CAP/MSA using CAPF 8, *Requisition for Publications and Blank Forms*.

- ☐ **If study sessions are to be held:**
  - Determine time [during meeting, Saturdays, a weekend] and the location.
  - Have group members obtain books.
  - Line up instructor(s) for the session(s).
  - Conduct the session(s).
- ☐ **If members desire self-study preparation:**
  - Ensure that each member has, or knows how to get, a textbook.
  - Offer assistance as needed.
- ☐ **Conduct Testing Session**
  - Testing materials may not be taken from the test site and no discussion during open or closed book testing.
  - Each member must work individually; each individual may choose the open book or closed book option.
  - Distribute test booklets.
    - Members following Open Book format may use books and / or notes.
    - Members following Closed Book format may not use any reference materials.
    - As each member completes the test, grade the test. Open Book format requires correction to 100% regardless of the score obtained. Closed Book format requires a 70% score to pass the test.
  - When all tests have been completed and graded, discuss all missed answers. Ensure that those using the Open Book format know the correct answer to each missed question. When you are satisfied that they understand all missed items, correct the score to 100%. Closed Book format tests are reviewed, but scores are not changed.
- ☐ **Collect completed answer sheets and record results on CAPF 126.**
- ☐ **Mail the entire answer sheet [not just the information area] to the Wing DAE.**
- ☐ **Mail completed CAPF 127 from Wing DAE to CAP National Headquarters/ETA.**

Each month the Wing DAE uses CAPF 127 to forward names of all successful candidates to National Headquarters for processing. Check the MML, in the AE column, for the year a senior member completed the AEPSM. Individual Yeager certificates (CAPC 20) are prepared by the Wing DAE and sent to the unit for presentation. Members completing the AEPSM can purchase, if desired, the ribbon and mess dress medal from the Civil Air Patrol Bookstore. Yeager ribbon and medal wear is in accordance with CAPM 39-1, *Civil Air Patrol Uniform Manual*.



A windsock at the airport helps the pilot estimate both wind direction and velocity.  
A floppy windsock indicates light winds. When strong winds blow, the windsock fills with moving air and billows out in the direction that the wind is blowing.

## EXTERNAL PROGRAM – Community Outreach

First, the facts:

- ★ CAP's corporate purpose is "... to provide aviation education ... to encourage and foster civil aviation in local communities (reference Public Law 476, 1 July 1946).
- ★ The external AE program presents aerospace education to the public through academic programs within the education system and contacts between the CAP members and their communities (reference CAPR 280-2).
- ★ CAP supports aerospace education workshops in school systems and colleges. Workshops are designed to provide educators with a basic knowledge of aerospace (reference CAPR 280-2).
- ★ CAP has numerous educational materials to enhance and supplement academic curricula that are available to educators and community organizations (reference CAPR 280-2).
- ★ CAP annually conducts the National Congress on Aviation and Space Education to promote an understanding of aviation and space education and motivate and encourage educators and others to incorporate aerospace education into their curricula or programs (reference CAPR 280-2).
- ★ Aerospace Education Membership (AEM) is a special category of Civil Air Patrol membership open to any reputable individual or organization that has an interest in supporting CAP's aerospace education program (reference CAPM 39-2, *Civil Air Patrol Membership*, and CAPF13).

Now, some remarks.

The external program is a bit more complicated than the internal program. The objective is clearly defined "providing aviation education ...to encourage and foster civil aviation in local communities." The way we provide for this is multifaceted and requires support from the receiving people and organizations in the community as well as from the CAP membership and paid staff.

CAP tries to connect educationally with educators in the all regions across the country. We do this in several ways. The Regional Directors of Aerospace Education (paid CAP staff members) support and participate in **workshops** that teach teachers how to use aerospace themes, materials, and resources (like airports and air museums) to teach their students subjects ranging from art, to language, to mathematics, to science, to history. As a follow-up to workshops in the regions, CAP National Headquarters annually plans and conducts, with volunteer helpers, the **National Congress on Aviation and Space Education**. The National Congress provides teachers who use, or are planning to use, aerospace in their classroom with finished instructional materials and instruction from master teachers in preparing and implementing lessons. Further, teachers are provided the latest information on national progress in air and space initiatives; and, are offered opportunities for personal discussions with famous aviation and space personalities.

CAP tries to support any teacher, individual, or organization that is attempting to use aerospace to educate or inspire their audience. We do this by providing a collection of free (or inexpensive) **materials** to the general public. The CAP National Headquarters paid staff has developed two aerospace education textbooks with instructor guides for use as teaching texts or as fact books. We

sell these at near production and shipping cost. CAP National Headquarters has over thirty free lesson plan kits, activity books, concept posters, and related materials that we send to any person requesting the material. The CAP Supply Depot, in a special Aerospace Education section of their sales catalogue, offers hundreds of educational kits, supplies, models, computer programs, and books at deeply discounted rates.

CAP National Headquarters has created a national association of CAP aerospace education advocates referred to as ***Aerospace Education Members***. These members pay CAP national dues, receive all aerospace education materials and services, have special authority to fly on USAF airlift supporting CAP aerospace education, and can, with special NHQ CAP/DO permission, fly in CAP aircraft. The CAP National Headquarters paid staff supports these members.

CAP ***partners*** with aerospace education programs and activities conducted in schools and by private and public community, state, and federal organizations. Regularly throughout the year CAP units and CAP volunteers participate in air shows, museum programs, school presentations that highlight, demonstrate, and present aviation and space information. The CAP staff of paid Regional Directors of Aerospace Education conduct, with an invitation, school visitations that include aerospace presentations or aerospace activity programs. Regionally, special aerospace events like “rocket launches” conducted annually in Delaware and Wisconsin by the state aeronautic division, and one-time events, like the John Glenn Aerospace Invitational conducted at Ohio State University with the 4-H Organization, are supported by a combined team of CAP volunteers and paid CAP staff. Nationally, special annual aerospace promotional events like the “International Aviation Art Contest” sponsored by all state aviation organizations, the FAA, and the Federation Aeronautique International are supported by the CAP National Headquarters staff.

You, the AEO, are the key to CAP’s AE Program.

“Local” means where you, live, work, and are a member of your CAP unit. So, when we say aerospace education in the “local community” we are talking to you. If there are going to be contacts with the school, you will have to make them happen. If aerospace education is going to be presented in the local museum or at the local air show, you have to design the program and make it happen. If you want teachers to use aerospace themes and materials to teach your community's youth, you have to speak to the teachers, provide the available CAP materials, and “show” them the support resources they can get from the CAP Supply Depot or the benefits of becoming Aerospace Education Members. Community outreach is an active, not a passive, process. To be active, you must always be looking for opportunities to participate in the activities of the community while presenting the many and varied ways aerospace can enliven, enrich, and improve the community.

In the foregoing remarks on the external aerospace education program, you probably have noted that there is a great amount of work being done continuously by the paid CAP staff – the Region Directors of Aerospace Education and the CAP National Headquarters. These people are resources for you. They can answer questions, provide resources, and facilitate projects and programs that may have started small but are growing beyond the “local” context. Seek out your Region Director of Aerospace Education and develop a dialogue. Talking, “blue skying” ideas, and trying out “little” first efforts are the only ways you will get started building a viable outreach program. Get your team to support you. The Region Director of Aerospace Education can help you avoid known pitfalls and identify and create “winners”. The partnership of commanders, aerospace education officers, and Region Directors of Aerospace Education can produce many and varied successful aerospace education outreach and partnership opportunities and programs. Involve them all. Use them all.

Aerospace Education Members are CAP members affiliated at the national level. These members come from local communities. They receive valuable aerospace education support from Civil Air Patrol. Historically, the teachers have been recruited via aerospace education workshops sponsored by Civil Air Patrol and by direct recruitment from Region Directors of Aerospace Education. You, as the unit AEO, and all the members in your unit should be recruiters of Aerospace Education Members. If you find a teacher, individual, or organization that wants to support aerospace education, but does not want to be a "regular" uniform wearing CAP member, recruit them as an Aerospace Education Member. You will be promoting CAP's aerospace education outreach program, expanding CAP membership, and creating a "half-way house" for your recruit to get to know CAP. If initially successful, later you may be able to bring the AEM into the fold as a "regular" CAP member. This identification and recruitment is important to sustaining the external aerospace education program in Civil Air Patrol.

External aerospace education can be difficult. If you try to do it by yourself, you will probably not have much, if any, program. Why? Because you are only one person. You have limited contacts in the community, limited time to do this task, and limited capacity to master all the potential resources available or needed to do aerospace education outreach. This same thought applies to your external AEO, if you have one. So, open the work up to everyone. Ask all the members to "keep their eyes and ears open" for opportunities to outreach. Cadets are excellent observers of teachers and can "spot" teachers who might need or want to use "new ways" such as aerospace to teach ordinary subjects. Once "spotted" send a motivated emissary to sign them up. Use everyone in the unit to support the outreach efforts, and, give credit to all so they will "keep listening" and "keep helping." When you find partnerships or programs that work well, analyze whether they are working because of local conditions or whether they have potential for "other locales." If they have broader potential, tell the Region Director of Aerospace Education so s/he can try your ideas in a larger or different area.

It is often said, "CAP is the best kept secret." This may be true. Aerospace outreach has a great potential to get CAP recognized and appreciated for its great service to America. It can be a great way locally to get good press in the schools, intrigue school children to come out and take a look at CAP, and create an image that will get public support and even donated resources. As the AEO, share this thought with your commander and the members of your unit. Promoting aerospace outreach actively can revitalize a unit and open many new avenues for growth and enrichment. Do it!

The Wright brothers made the first successful powered flight in a heavier-than air craft on 17 December 1903. Wilbur and Orville took turns piloting their craft through four successful flights. *The Flyer*, which had a 40 foot - 4 inch wingspan, weighed 605 pounds and was powered by a four-cylinder, water-cooled engine. Eight-foot propellers, shaped like twisted wings, were mounted behind the wings with bicycle chains and helped to push the plane through the air. The curved wings were covered with muslin and the trailing edges could be warped to bank the plane. The *Wright Flyer* is on display at the National Air and Space Museum at the Smithsonian in Washington DC.



## How to Identify Prospective Aerospace Education Officers

What is it?

A process for seeking, finding, and recruiting senior members to serve as aerospace education officers.

Who does it?

The existing aerospace education officer (at any level) and the commander.

Why Do This?

Aerospace education is an active process. It requires a leader. The leader must be able to gather resources in support of planning, coordinating, carrying out, evaluating, and reporting aerospace education events, activities, and programs. The leader must understand the relationship between adult learning, CAP aerospace education objectives, and having fun. This knowledge arms the aerospace education leader with the characteristics to look for in potential recruits.

Qualifications Required:

A senior member assigned to your unit who has

- 1) an interest in aerospace education
- 2) a willingness to learn, and
- 3) a willingness to lead

Desirable:

A senior member in your unit with a background in education and teaching.

Step by Step Instructions:

☐ **Consult with the commander about unfilled, or about to be vacant, aerospace education officer positions.**

- ★ If openings exist, or are about to exist, it is time to identify AEO candidate(s).
- ★ If the commander has no one in mind, advise the commander on the qualifications you will be looking for during your search.
- ★ If the commander has a person in mind for the job, discuss the candidate's qualifications.

☐ **Determine method for "advertising an opening" and identifying a potential AEO**

- \_\_\_\_\_ Review the records of senior members and look for an educational background and/or aerospace education interests or skills. Talk to well-informed senior members about individuals they think may be a good AEO.
- \_\_\_\_\_ Post qualifications you are looking for in a senior member to fill the AEO position. "Posting" can be done through verbal announcements at unit meetings, through notices on unit bulletin boards and newsletters, or general "word of mouth."

☐ **Conduct a personal meeting with senior members who potentially meet basic AEO qualifications.**

- \_\_\_\_\_ Contact the person and tell them you think they can qualify to be an AEO. Note their reaction.
- \_\_\_\_\_ Present your "pitch," i.e., the need for an AEO, the rewards of the job, the actual tasks the senior member must do as AEO, support available from command, other

staff, members, professional development, and the earned ratings and potential rewards.

\_\_\_\_ Listen to responses, i.e., you should hear interest, confidence, and commitment. Note: The candidate's admission of a lack of experience is not at all disqualifying; in fact, it may reflect the thoughtful response of an excellent candidate.

☐ **Resolving the no good single candidate problem.**

- ★ "Toe Dip Method" – Ask the person to try doing just one aerospace education task. If the first task is successful, seek a second task to continue to build confidence. Continue until the person has become the "de facto" AEO. **NOTE:** This technique only works if the person being "toe dipped" gets some help and receives praise for the tasks accomplished.
- ★ "Team Method" – Ask two or more folks to share the tasks. Let them divide the work. Give them support and praise. **NOTE:** This method works well for husband and wife, mother and child, senior member and teacher or cadet teams who like to do things together. Also, it works for a mix of one person who likes to "do things" and one person who likes to organize and keep records, a "paper pusher."
- ★ "Outside Recruit Method" – Look at the other units in the area and see if anyone qualified to be an AEO wants to transfer. If so, meet and check them out. If you want to "raid" another unit, be sure your commander knows. Also, look for AEMs in your area. Contact them to see if any want to transfer membership from AEM to regular CAP member and be the unit AEO.

☐ **Creating a favorable recruiting climate**

Perception: Volunteers do things that appear to be fun and rewarding. Make it so. Start with the things they think are fun when you do training or assign tasks.

Rewards: Every time someone does a good job praise them publicly. Identify specifically what they did that was exceptional. Every time someone gets an aerospace award, let everyone know loudly and publicly. Point out how it fills the ribbon bars on the uniform or fills the award space on the wall.

Correction: People in a job don't always do the job or don't do it very well. Do not leave poor performers in the AEO job. Leaving a poor performer in the job shows everyone you do not think the job is important enough to do right. Further, it causes the person to learn the wrong lesson about expected performance. So, say thank you for trying, move them out, and return to the search mode.

Command support: Have the commander take part in the AE activities. S/he should ask the important questions during the staff meetings and get everyone in the unit involved in at least one or two "fun" AE moments. Commanders who never mention AE are by their silence creating a poor recruiting climate.

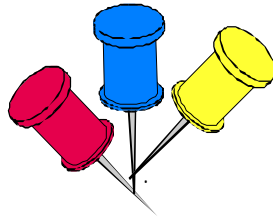
☐ **Creating confidence in the "willing" AEO recruit**

\_\_\_\_ Training: Schedule it, do it, and follow-up with practical exercises for confidence building. Use the process of: 1) Telling the AEO recruits what you want them to know, do, and understand; 2) Show them how to do the tasks, and, 3) Let them do the tasks in a supervised or a reviewed format and give them supportive feedback.

\_\_\_\_ Expert support: When a new, complex, or critical task is about to be done by the AEO recruit, help find an "expert" (someone who has successfully done it before) to help with the task.



A Word of Caution! : If the AEO recruit is about to bite off more than is reasonable, tell him so. Encourage him to wait until he can create the right environment for success.



## **How to Develop an Aerospace Education Bulletin Board**

### **What Is It?**

A way to share information through a visual reminder of the importance of aerospace education for Civil Air Patrol members.

### **Who Does It?**

The Aerospace Education Officer and/or unit Aerospace Education staff personnel

### **Why Do This?**

A bulletin board provides the AEO with an interesting way to disseminate information, to expose aerospace topics to unit members, and allows the AEO to post information to reach the widest possible audience.

### **Materials Required:**

Fixed or mobile bulletin board or display boards.  
Border and background paper to make the bulletin board attractive  
Pictures with labels, news articles, CAP Aerospace Education Information, etc.

### **Step by Step Instructions for the AEO:**

- ☐ **Determine what purpose you would like the bulletin board to serve.**
- ☐ **Determine – 1) Topic Areas; 2) frequency of updating; 3) use of posted material during unit meetings, and 4) who will maintain the board.**
  - \_\_\_ Survey unit membership for input as to items/topic areas/themes for the board.
  - \_\_\_ Assign a person to be responsible for the bulletin board and provide training, guidance, and feedback.
- ☐ **Make the bulletin board look professional.**
  - \_\_\_ Does it need background paper, border paper, frame painting, special effects?
- ☐ **Gather articles, pictures, and other materials to be displayed on the bulletin board.**
- ☐ **Arrange the items in a pleasing format.**
  - \_\_\_ Does the bulletin board “catch the eye” of unit members?

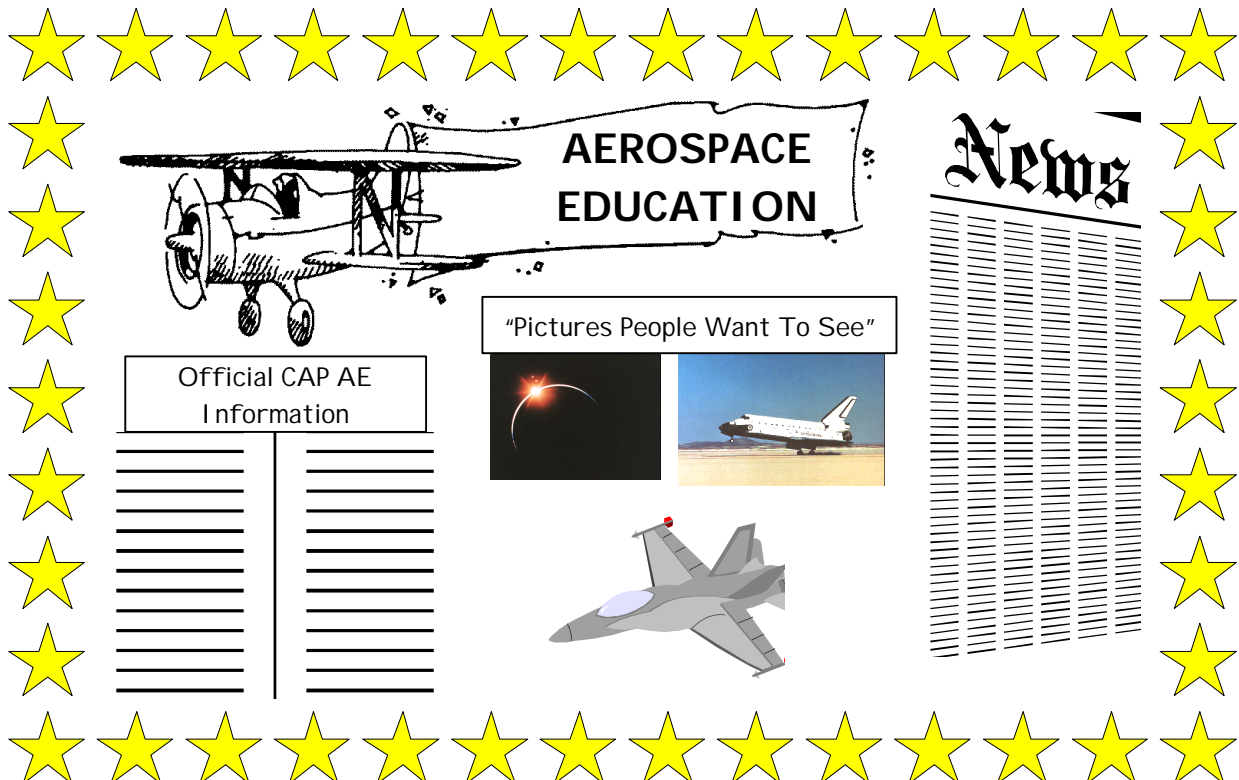
- ☐ **Regularly review materials posted; assess effectiveness; remove outdated items; add new items.**

\_\_\_\_ Are people reading, discussing, and using the information?

\_\_\_\_ Is the information current?

**Some suggestions for items/information to include on an aerospace education bulletin board:**

- \_\_\_\_ Copy of the most recent wing and/or region aerospace education newsletter.
- \_\_\_\_ News articles, pictures with captions concerning unit members and others involved in aerospace activities.
- \_\_\_\_ Chronology of upcoming aerospace events (air shows, fly-ins, field trips, speakers, special aerospace activities, upcoming TV specials, Internet sites, etc.) with details about time, location, purpose, cost information (if available).
- \_\_\_\_ Aerospace Education Program Schedule for Senior Members -- testing dates, sign-up for group study, listing of recent Yeager Award winners in the organization.
- \_\_\_\_ Information from National Headquarters relevant to new or ongoing aerospace education programs.
- \_\_\_\_ CAP aerospace education workshop/conference/seminar/National Congress information.
- \_\_\_\_ CAP Aerospace Excellence Award information and activities planned for the program.
- \_\_\_\_ Book reviews, aerospace publications or a list of "classics" to read.
- \_\_\_\_ Trivia corner with local, state, national, and international questions, plus a challenge ladder with the correct answer being able to "post" the next trivia question.
- \_\_\_\_ Scholarship and individual aerospace awards programs individuals can enter with instructions on how to enter or where to find the details to enter.



## How to Develop an Aerospace Education Resource Center

### What Is It?

A way to share aerospace resources with unit members and the community.

### Who Does It?

The Aerospace Education Officer and/or other unit members.

### Why Do This?

A resource center provides support for aerospace education programs, both internal and external.

### Materials Required:

Whatever materials you choose to include in the Resource Center and a room, or a portion of a room, devoted to the Resource Center.

### Step by Step Instructions:

☐ **Determine what purpose you would like the Aerospace Education Resource Center to serve**

- \_\_\_\_\_ Do you want to supplement education programs in the unit / wing / region?
- \_\_\_\_\_ Do you want to provide resources for the local community?
- \_\_\_\_\_ Do you want to gather resources to support programs inside and outside the organization?
- \_\_\_\_\_ Is the Resource Center designed to be a place to come and work, or is it a material-lending site?
- \_\_\_\_\_ If it is a come and work Center, what hours will it be open and available? Who will be able to use it?

☐ **Determine control, management of the Aerospace Education Resource Center**

- \_\_\_\_\_ Who will have access?
- \_\_\_\_\_ Who will be responsible for the materials located in the Resource Center?
- \_\_\_\_\_ Who will maintain the Resource Center?

☐ **Determine the materials to be located in the Aerospace Education Resource Center**

- \_\_\_\_\_ Books and magazines?
- \_\_\_\_\_ Videotapes and Audiotapes?
- \_\_\_\_\_ Slides and Overhead transparencies?
- \_\_\_\_\_ Models, Pictures, and Memorabilia?
- \_\_\_\_\_ Computer programs and Computer games?
- \_\_\_\_\_ Maps, Globes, Flight Planning tools?
- \_\_\_\_\_ Equipment [TV/VCR, cassette player, slide projector, overhead projector, computer, plotter]?

☐ **Determine the process for borrowing items from the Aerospace Education Resource Center**

- \_\_\_\_\_ Will you mail items, or must users pick them up in person?
- \_\_\_\_\_ How will you ensure materials are returned to the Resource Center for others to use?



- \_\_\_ How long will users be able to keep materials?
- \_\_\_ Who will approve or authorize lending of Resource Center materials to others?

☐ **Gather the materials, arrange them in the Resource Center for both ease of use and attractiveness**

- \_\_\_ Contact the Region Director of Aerospace Education (CAP corporate employee) for advice on sources for materials.
- \_\_\_ Determine who will catalogue and arrange materials in the Resource Center?

☐ **Some suggestions for items to include in an Aerospace Education Resource Center:**

- \_\_\_ Aerospace books / reference materials (ask members, libraries, others for donations).
- \_\_\_ Aerospace magazines such as *Air and Space*, *Aviation Week and Space Technology*, *Private Pilot*, *Air Force Association*, etc.
- \_\_\_ Aerospace video tapes (ask for donations and consider making copies of non-copyrighted tapes).
- \_\_\_ 35MM slide programs (good idea to keep a slide projector too!).
- \_\_\_ Aerospace pictures/posters – NASA, Airlines, Aircraft Builders, FAA, USAF, etc. Most can be gotten for free.
- \_\_\_ Aerospace lesson plans from CAP, NASA FAA, etc.
- \_\_\_ Aerospace models (ask for donations, include fact cards related to each model).
- \_\_\_ FAA materials (keep “reference only” FAR and AIM books).
- \_\_\_ Pilot information (pilot training materials, flight planning, navigation, weather, safety sections).
- \_\_\_ Aeronautical charts (mix types from local to global, include fact cards on what to learn from each map).
- \_\_\_ Materials from aerospace groups (EAA, Challenger Centers, Young Astronauts, Soaring Society).
- \_\_\_ Information on other aerospace programs, such as Space Camp and Aviation Challenge.
- \_\_\_ Internet information (aerospace web site addresses).

If you have a room or a section of a room devoted exclusively to the Aerospace Education Resource Center, you can post aerospace pictures, put models on display and visually enhance the Center. Set up an inventory and record keeping system so you can keep track of your resources.



A 1953 Cessna 180 takes to the skies over Frazier Lake Airpark, California. Vintage and restored aircraft can often be seen at air shows or on display in aviation museums.

## **How to Develop and Conduct an Aerospace Current Events Discussion**

### **What Is It?**

An aerospace current events discussion is conducted in a CAP unit among the members to promote critical thought and share information concerning aerospace events and issues.

### **Who Does It?**

The Aerospace Education Officer or other unit member(s).

### **Why Do This?**

To broaden members' knowledge, and focus members' thinking about the importance of aerospace to the security and prosperity of our nation and mankind.

### **Materials Required:**

Source pieces (newspaper, magazine, television, radio) which provide aerospace subjects and basic information to provide starting points for discussion.

### **Step by Step Instructions:**

- ☐ **Determine how often / how long you will have AE Current Events discussion**
  - \_\_\_ Get the commander's agreement to follow the frequency plan.  
Without the commander's support, the plan is ineffective.
- ☐ **Determine procedures for preparing for and conducting AE Current Events discussion**
  - \_\_\_ Determine the amount of time to be allotted to topic presentation and discussion.
  - \_\_\_ Determine a process to identify potential discussion topics and to collect "source pieces." (Note: A proven, easy, fast, reliable way to find "source pieces" is to have members clip aviation and space articles from newspapers or magazines and bring them to the meeting. Place the articles in a "grab bag" and pull out an article at random as the source piece for the discussion. The same can be done with recorded television or radio tapes.)
  - \_\_\_ Determine a process to pick a member to initiate the discussion once the "source piece" is selected. This does not necessarily have to be the person who brought the article.
  - \_\_\_ Designate a timekeeper to keep the discussion within the planned time block.
- ☐ **Establish a process to keep track of topics discussed by the group**
  - \_\_\_ Simple spread sheet with date, topic(s) discussed, discussion leader(s), provides a good record.
- ☐ **Evaluate AE current events discussion period**
  - \_\_\_ Were the members involved throughout the lesson (interested and attentive)?
  - \_\_\_ Did the members grasp the main points – the "so what" or the "why this is important"?
  - \_\_\_ Was the discussion too long or too short (met planned time, kept group attention, got information across)?
  - \_\_\_ Did the support materials work well for the lesson (attention grabbing, changed pace, added value)?

NOTE: You will be repeating the discussion process with your group. Take time to replace any processes or procedures that did not work well. Try alternative techniques. Mix up the routine so the process stays fresh. Keep notes on the discussions, the group reaction, any special successes or experiences which you can apply when "freshening up" the process in the future.

## **How to Develop, Teach, and Evaluate an Aerospace Lesson**

### **What Is It?**

An Aerospace Lesson is a structured teaching event designed to be conducted by a teacher with the objective of imparting knowledge or skills to the participating students.

### **Who Does It?**

The Aerospace Education Officer or other unit member(s) or external guest speaker(s).

### **Why Do This?**

To support aerospace study, and to broaden members' and students' knowledge and understanding.

Materials Required: Determined by the lesson plan developed and teacher needs.

### **Step by Step Instructions:**

#### ☐ **Determine the goals and objectives of the lesson**

\_\_\_\_\_ What do you want the students to know or be able to do at the conclusion of the lesson?

#### ☐ **Determine the group for which the lesson is being prepared**

\_\_\_\_\_ Cadets or students – consider group size, current knowledge/experience, age and maturity levels, group and individual motivation.

\_\_\_\_\_ Senior members (same considerations as listed above).

\_\_\_\_\_ Local school or community groups (same considerations as listed above).

#### ☐ **Determine the appropriate type of presentation for the group**

\_\_\_\_\_ Lecture -- Requires expert knowledge and a dynamic, creative presenter.

\_\_\_\_\_ Discussion -- Requires strong facilitator skills to manage group interaction.

\_\_\_\_\_ Hands-on -- Highly motivational, but can be hampered by the materials expense.

\_\_\_\_\_ Field Trip -- Requires coordination with the site visited, transportation arrangements, chaperons, time, and could involve admission fees.

#### ☐ **Determine the focus [main points] of the lesson; length of time for the lesson**

#### ☐ **Gather the materials needed in order to present the lesson**

\_\_\_\_\_ Visual aids such as: pictures, charts, maps, overhead transparencies, and slides.

\_\_\_\_\_ Action material such as: videotapes, audiotapes, and computer support.

\_\_\_\_\_ Props such as: models, demonstration items, and memorabilia.

- ☐ **Gather materials necessary for any hands-on activity that will be part of the lesson**
  - \_\_\_\_\_ Make sure you have enough materials for all students involved in the lesson.
  - \_\_\_\_\_ Arrange for space to conduct the activity and any supervisors/helpers needed.
  
- ☐ **Prepare your lesson notes to cover the identified main points of the lesson**
  - \_\_\_\_\_ 1) Introduction (get group interested).
  - \_\_\_\_\_ 2) Message or activity (tell them what you want them to learn).
  - \_\_\_\_\_ 3) Recap (review what has been learned, why it's important); leave them enthused.
  
- ☐ **Practice your presentation**
  - \_\_\_\_\_ Use all materials and equipment during practice that will be used during the actual lesson (this allows you to be certain that the materials and equipment work).
  - \_\_\_\_\_ Record the presentation time (so you can adhere to the allotted time for the lesson).
  - \_\_\_\_\_ Have, when appropriate, an observer (to give you feedback on how well you presented and whether the intended message was delivered and received).
  
- ☐ **Present the lesson, and remember the following points:**
  - \_\_\_\_\_ Passive lectures provide little or no student involvement or feedback. Sleep is often a by-product of a long lecture. Active student involvement in discussion or a hands-on lesson is the key to success. Don't stand in front of the group and read lesson notes — you'll lose the audience long before your lesson is concluded. If an activity is part of the lesson, enlist other unit members to assist students involved in the lesson. Always encourage student involvement! Always consider potential safety hazards associated with activities; directly address safety rules before you start the activity.
  - \_\_\_\_\_ Address student questions — don't leave them perplexed at the close of the lesson.
  - \_\_\_\_\_ Allow time for set-up and clean up. It takes time to set up equipment, to display materials, to pick up scrap materials, and to re-pack supplies, tools, and equipment.
  
- ☐ **Evaluate lesson success**
  - \_\_\_\_\_ Were the students involved throughout the lesson (interested and attentive)?
  - \_\_\_\_\_ Did the students grasp the main points of the lesson (pass the test, successfully complete the activity requirements, asked intelligent questions, etc.)?
  - \_\_\_\_\_ Was the lesson too long or too short (within the planned time period, kept student attention, got information across)?
  - \_\_\_\_\_ Did the support materials work well for the lesson (attention grabbing, changed pace, added value)?
  - \_\_\_\_\_ If the final objective was successfully completing a test or performance evaluation, were the students able to do so?
  
- ☐ **Some Laws of Learning regarding the "audience":**
  - \_\_\_\_\_ Primacy -- The first impression is the lasting impression.
  - \_\_\_\_\_ Readiness -- Students should have a positive attitude about the need to learn.
  - \_\_\_\_\_ Exercise -- Repetition increases learning.
  - \_\_\_\_\_ Intensity -- The lesson should be as exciting as possible.
  - \_\_\_\_\_ Recency -- The closure of the lesson also leaves a lasting impression.

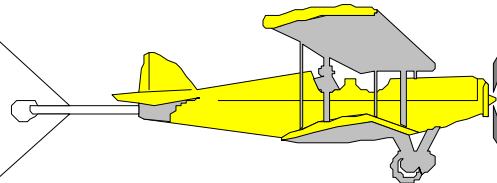
NOTE: If you will be repeating the lesson for another group, take time to replace any materials that did not work well and / or find alternative activities for those that did not keep the students involved. Keep notes on your lesson: the group / student reactions to the lesson content and any special successes or experiences which you can apply when giving the lesson in the future.



Syncom IV-3 was deployed from Space Shuttle Discovery on mission 51-C, a 3-day Department of Defense flight. The satellite was left in low Shuttle orbit because of a failure that resulted in Syncom not being able to turn itself on. As a result, the satellite could not automatically control the propulsive firings that would have pushed it into a geo-synchronous orbit. Therefore, the satellite merely remained where it was.



## How to Develop and Evaluate an Aerospace Activity



### What Is It?

An aerospace activity is a structured event designed to be conducted by a leader with the objective of having fun, doing a physical activity, and imparting knowledge or skills to the participants.

### Who Does It?

The Aerospace Education Officer plans the activity; the unit members decide to “do” the activity, and a selected or designated leader(s) conducts the activity.

### Why Do This?:

To provide fun, team-building activities for the unit and to broaden members’ and students’ knowledge and understanding of aerospace.

### Materials Required:

Determined by the activity content.

### Step by Step Instructions:

#### ☐ **First, “The Real Question”: How do I come up with ideas for activities?**

- \_\_\_\_\_ Ask people you trust for ideas, don’t limit ideas even though later you will have to evaluate according to time, money, interest issues.
- \_\_\_\_\_ Look in books (books at the bookstore for really new stuff and at the library for some good old ones that may have been forgotten and are ready for revival). You’ll probably find pictures and instructions. You may also contact your RDAE for ideas.
- \_\_\_\_\_ Ask specialists (such as pilots, teachers, model aircraft builders or flyers, astronomers, weathermen) to suggest activities that are air or space related and fun to do. They will probably have material lists, instructions, and may offer to lead an activity.
- \_\_\_\_\_ Find partners such as cadet program folks, to help with AE activities, or contact pilots to conduct exercises with cadets to acquaint them with the principles of flight.

#### ☐ **Determine the goals, objectives, and parameters of the activity**

- \_\_\_\_\_ What do you want the group to remember at the conclusion of the activity -- the fun, the sciences, the trip?

- \_\_\_\_\_ How much time will be devoted to: planning, setting up, doing the activity, and cleaning up?
- \_\_\_\_\_ How much will it cost for materials -- reusable/expendable?
- \_\_\_\_\_ Are there people to lead the activity and ensure it successfully meets the objectives?
- ☐ **Determine the group for which the activity is targeted**
  - \_\_\_\_\_ Cadets or students -consider group size, current knowledge / experience level(s), age / maturity levels, group and individual motivation.
  - \_\_\_\_\_ Senior members (same considerations as listed above).
  - \_\_\_\_\_ Local school or community groups (same considerations as listed above).
- ☐ **Determine the activity environment**
  - \_\_\_\_\_ Indoor or outdoor. Weather is not a factor indoors, but space may be limited. Outdoor weather and the activity's impact on "neighbors" may call for activity adjustments.
  - \_\_\_\_\_ Single or sequenced event. Are you going to do the activity and be finished in one session or are you going to sequence the activity over several sessions?
  - \_\_\_\_\_ Home or Field Trip. Home location saves travel time and avoids transportation costs, but the sense of adventure in a field trip may be well worth the effort.
  - \_\_\_\_\_ Hands-on or Demonstration. Hands on activities are generally more expensive because of the costs of materials, but they are highly motivational. Demonstrative activities require good instructors to keep the interest level high.
- ☐ **Determine the "hook" which will make people want to do activity**
  - \_\_\_\_\_ Fun. This is an essential ingredient for all activities.
  - \_\_\_\_\_ Competition. Encourages participants to put forth their best effort.
  - \_\_\_\_\_ Professional Development. Select activities that help cadet and senior members progress in CAP.
  - \_\_\_\_\_ Reward. Trophies, certificates plaques, token gifts, etc., add a professional touch to culminate the activity.
- ☐ **Gather the materials needed in order to present the activity**
  - \_\_\_\_\_ Supplies. Such as consumable items needed by the teacher and students.
  - \_\_\_\_\_ Instructional Materials. Such as handouts instructor guides, overhead viewgraphs, and sequenced flip charts.
  - \_\_\_\_\_ Props. Items such as models, demonstration items, and partially completed stages of the activity.
  - \_\_\_\_\_ Support Items. Consider vehicles for field trip, chaperons, supervisors / helpers.
- ☐ **Practice the activity**
  - \_\_\_\_\_ Do it exactly the way you envision it happening -- make note of the time involved in setup, execution, and clean up. Anticipate the questions that will be asked by the students and formulate the answers in advance.
  - \_\_\_\_\_ Do it again. Refine your planning factors and polish your presentation
- ☐ **Prepare your activity notes to cover the entire activity process**
  - \_\_\_\_\_ 1) Introduction (get group interested and identify materials to be used),
  - \_\_\_\_\_ 2) Activity (do the activity in sequence),
  - \_\_\_\_\_ 3) Recap (remind the group of what they have learned, why it's important, and leave them enthused about their accomplishment).

☐ **Do the Activity, and remember**

- \_\_\_\_\_ Your “hook” promised some motivation, make sure you work to deliver.
- \_\_\_\_\_ Active involvement in a hands-on activity is the key to success.
- \_\_\_\_\_ Enlist “non-involved” unit members or observers to assist the people involved in the activity; once joined in they will add to the excitement.
- \_\_\_\_\_ Always encourage feedback and interaction.
- \_\_\_\_\_ Always consider potential safety hazards associated with activities and emphasize the safety rules before you start the activity.
- \_\_\_\_\_ Be sure to address participant questions. Don’t leave them perplexed during or at the close of the activity. If you don’t know the answer to a question, do some research, and follow up later.
- \_\_\_\_\_ Allow time for set-up and clean up. It takes time to set up equipment, distribute materials, pick up scrap material, re-pack supplies, tools, and equipment. Clean up the mess!

☐ **Evaluate activity success in terms of the group/individual progress**

- \_\_\_\_\_ Did the activity hold the interest of the students?
- \_\_\_\_\_ Was the activity too long or too short (conducted on schedule, kept student attention, involved all participants)?
- \_\_\_\_\_ Did the support materials work well (attention grabbing, changed pace, added value)?
- \_\_\_\_\_ If the final objective was completing a test or evaluation, how successful were the students?

NOTE: If you will be repeating the activity for another group, take time to replace any materials that did not work well and / or find alternative materials for those that did not keep the students involved. Keep notes on your activities concerning the group / student reactions, any special successes or experiences which you can apply when doing the activity in the future.



Flight instruments serve dual purposes: they allow for safe flight though clouds and during night flights. They also show pilots how well they are controlling the aircraft. Flight instruments provide critical data to the pilot, including information on altitude, airspeed, and attitude

## **How to Develop Cadet and Senior Aerospace Education Material**

### **What Is It?**

Material which can be used to present aerospace education to CAP cadets or seniors.

### **Who Does It?**

The Aerospace Education Officer may develop the material or the AEO may arrange for others to develop the material while the AEO acts as coordinator.

### Why Do This?

To create aerospace education material to enhance learning about aviation and space.

### Materials Required

Determined by the mode that the material will be presented (paper, video, model, exhibit).



### Step by Step Instructions:

- ☐ **First, ask yourself the question: "What aerospace material am I lacking?"**
  - \_\_\_\_\_ How do you know you "need" the material required? Consult unit members on their perceptions of what is lacking in the unit's AE program.
  - \_\_\_\_\_ Is the material you are lacking nonexistent, not readily available, or just not current?
- ☐ **Determine what is needed to create or gather the AE material**
  - \_\_\_\_\_ Is the aerospace information available from an existing source such as a book, newspaper, magazine, Internet, or video? And, is it available in a releasable form that does not require a copyright release?
  - \_\_\_\_\_ Do you have the resources (people, time, production materials) to create the AE material?
- ☐ **Determine the materials and techniques you want to use**
  - \_\_\_\_\_ Decide what you want to do. This requires an examination of the goals and objectives you have established for you unit's AE program. For example, if your emphasis is on aviation history and you have the opportunity to visit an aviation museum, then perhaps you might want to videotape the experience and bring it back to share with unit members.
  - \_\_\_\_\_ Detail the sequence you will follow to produce the material. This is especially important if a team approach is used to produce the material.
  - \_\_\_\_\_ Match people to each task and provide each of them with the plan and timeline so they know as much as you do about the project.
- ☐ **Schedule the work and determine the "long poles in the tent"**
  - \_\_\_\_\_ Work can progress in series with one event occurring after another, or in parallel where several tasks are being done by different people at the same time (such as acquiring pictures of spacecraft while another person is writing factual descriptions of the spacecraft and another is getting film clips and copyright releases). Use parallel methods when you have clearly defined tasks and expect no changes later. This ensures that when the work is finally combined, the various pieces will easily mesh. Parallel work can expedite material production by saving time, but it takes more planning. Series work must be used when you need something before any further progress can be made. For example, you must gather and evaluate information before you can begin writing a lesson plan.
  - \_\_\_\_\_ "Long poles in the tent" is an expression that simply means you must plan for the tasks that pose the greatest difficulty or will take the longest time to complete. Make certain you focus on getting these tasks done successfully and on time.
- ☐ **Production and distribution of material**
  - \_\_\_\_\_ How many do you need to produce and distribute -- one, a few, or more.
  - \_\_\_\_\_ How much will it cost to produce, distribute and who will pay?
  - \_\_\_\_\_ How long will it take to produce and distribute -- reflect on the due date and adjust accordingly.

☐ **Mastering the material and archiving**

- Save the “master” originals to allow for reproduction later, or updating without having to start again from scratch. Masters may be text, computer disks, pictures, video, or audio products.
- Archive in storage where the material will not physically deteriorate and can be found when you “remember” you need it.

☐ **Some additional thoughts**

- Workers for developing aerospace education materials are not plentiful. But, with a little effort you can find individuals or groups who are passionate about a particular aerospace topic. They will often gather material and prepare a pitch on what they know and love. Search out these folks and ask them to adjust their presentation to meet the particular interests of your unit.
- Many aerospace products, topics, and events are current only for a short period of time. For example, if your unit is tracking the path of a comet which nears Earth only once every 100 years, you’ll need to capitalize off current information sources such as trade papers, magazines, and the Internet.
- Recognition is the key factor in getting people to develop AE materials. Always have a way of saying thanks to the people who develop AE materials.
- Unfortunately, money is a necessary ingredient in the development of many AE products. Be constantly aware of local donors who might want to help. The Air Force Association provides grants to CAP units, so don’t miss the chance to apply. Also, fund raisers for different projects can help build morale and help AE at the same time.
- Evaluation is an important part of assessing the worth of your AE product. Evaluate your materials through several perspectives. Did the material convey the message intended? Did the material please the users? Did the material work for the presenter? If all responses are “yes”, your material worked.
- Integration is the process of combining the actions involved in seeing, hearing, and doing. Good integration in an educational product improves learning retention. Educational research has established that when a “straight lecture” is given to students 70% of the information is retained 3 hours later, and 10% 3 days later. When visual aids alone are used, 72% of the information is remembered 3 hours later, and 20% is retained 3 days later. When lecture and visual aids are combined, 85% of the information is retained 3 hours later, and 65% 3 days later. When a lecture with visual aids is reinforced by a student activity, an even higher level of information is retained and, the students achieve higher comprehension and application of the information. So, don’t just “say it”; rather, “say it”, “show it”, and let the cadets, seniors, or the audience, “do it”. Build your materials with this thought in mind.

**Man’s flight through life is sustained  
by the power of his knowledge.**

## How to Make an Aerospace Presentation In a School or to a Community Group

### What Is It?

Opportunity to professionally present Civil Air Patrol and aerospace education to the public.

### Who Does It?

The Aerospace Education Officer, or the AEO may arrange for others (cadets, seniors, air or space experts, or a mixed group) to make the presentation.

### Why Do This?

To promote aerospace education in the community; to potentially recruit new cadet, senior, and Aerospace Education members; to identify affinity groups which can be partnered with to promote aerospace education; and to promote CAP's visibility through public interaction.

### Materials Required:

Determined by the place, time, mode of presentation (paper, video, computer, model, exhibit) and support equipment available.

### Step by Step Instructions:

#### ☐ **First, "Get invited"**

- \_\_\_\_\_ Offer your services to a school, a civic group, or to a community event.
- \_\_\_\_\_ Find out what presentation would be most beneficial to them (What is CAP and what does CAP do for America?---What is aerospace education?---How do planes fly?---How do rockets fly?---A display booth at an air show or a school careers day.).
- \_\_\_\_\_ How much time do you have for the presentation -- an hour, a morning, a day?

#### ☐ **Determine what message you want to convey during the presentation**

- \_\_\_\_\_ Action Oriented. Seeking to get people to do things such as join CAP, vote for a bond issue to improve the local airport, create an aerospace club in the school, etc.
- \_\_\_\_\_ Information Oriented. Seeking to raise awareness or interest in aerospace issues such as the growth of commercial space operations in the aerospace industry, air travel safety, the shortage of pilots and mechanics to support commercial aviation, etc.
- \_\_\_\_\_ Future Oriented. Exploring possibilities for the future such as man living in space or on the moon, super cruise aircraft, the exploration of Mars, etc.

#### ☐ **Determine materials and techniques you want to use**

- \_\_\_\_\_ Just plain fun! – Employ hands-on activities whereby the audience builds or does something individually or collectively under your instruction. An example would be to build and fly paper or balsa airplanes with a "longest time aloft" contest. The educational objectives include aircraft design, aircraft construction, aircraft control, and the principles of flight. Also, take your materials and show the audience how to do something which will pique their interest in aerospace and CAP, such as building and launching a 2 liter soda bottle compressed air rocket and displaying the computer software which will allow anyone to design, build, and cyber-launch these rockets.
- \_\_\_\_\_ Show them your "stuff." Create a collage, video production, or computer animated multimedia presentation about CAP activities such as search and rescue, disaster relief exercises, counter drug operations, ground team training or CAP cadets in action.
- \_\_\_\_\_ Use your expertise. An interactive approach with a small group where you present or discuss a variety of aerospace areas and respond to the audience interests such as how does aerospace affect my life, how do airplanes fly, what is search and rescue, why should I care about space operations or exploration?
- \_\_\_\_\_ What is CAP? Borrow the Level I CAP Orientation Course Video and instructor materials from your unit training officer and conduct the course, or portions of it, for a social, professional, business, church, or community service organization.

☐ **“Practice, practice, practice” your pitch**

- \_\_\_\_\_ If you are doing hands-on, ask some cadets or seniors to act as your audience and provide feedback. Make sure you have enough material for everyone. Make sure you have enough helpers. Make certain you can answer questions that relate to your activity and the larger subject matter area.
- \_\_\_\_\_ If it is a traditional demonstration or lecture, make sure your “visuals” and “audio” can be seen and understood by everyone in the audience. If you are using high tech stuff like computer presentations, ensure the presentation site can support the technology, and that it can be seen and heard. Make your points in a lively, fun, encompassing way. Fast and fun is better than long and boring.
- \_\_\_\_\_ If it is a forum of open dialogue, come preloaded with topics, information, and examples. It may take a while to get a response from the audience. Offer some provocative thoughts that may lure folks into the discussion. Try to create a focus that is aerospace based and help the group identify with that theme.
- \_\_\_\_\_ If it is a demonstration, make all the parts clearly visible so the people in the rear of the audience can see and stay involved.
- \_\_\_\_\_ In all cases remember you are selling CAP, promoting aerospace education, creating a climate which might cause people in the audience to join or support Civil Air Patrol. Seize the moment. Let your audience know that what you would like them to do, i.e., “team with us and promote aerospace.”

☐ **Feedback**

- \_\_\_\_\_ Ask your contact person whether your presentation met his or her wishes – this lets you determine how well you understood their request and how well you delivered.
- \_\_\_\_\_ For a second opinion, ask your helpers (those you brought with you) what they thought about your presentation.
- \_\_\_\_\_ Engage the audience in a critique process to determine whether the actions you promoted in the presentation were accepted.

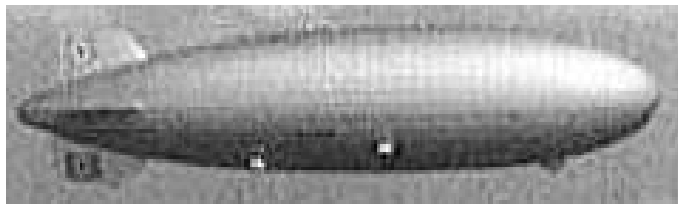
☐ **Build a library of presentations and a corps of speakers**

- \_\_\_\_\_ Save the “master” originals to allow later reproduction or updating without having to start from scratch (masters may be text, computer disks, pictures, video, audio). Update occasionally to keep current.
- \_\_\_\_\_ Store your instructional material where it will not physically deteriorate and can be found when you need it.
- \_\_\_\_\_ Index your listing of potential speakers (know their topics, techniques, availability dates, and their presentation ratings so you can match future requests to your “qualified speakers bureau”). Keep the file current.

☐ **Some additional thoughts**

- \_\_\_\_\_ Have a variety of presentations. The same old thing time after time gets boring.
- \_\_\_\_\_ Closure is important. When you want your audience to “do something” ensure you get their complete cooperation.
- \_\_\_\_\_ If at first you don’t succeed, try, and try again. Making presentations is not easy. Successful presentations take practice, confidence building, and tailoring of your expectations to those of the audience. You are investing in promotion of aerospace education; so, repetitive effort is worthy. Try your presentation out on small audiences first and then move on to larger groups.

Today, airships are used to cover sporting events and parades and for aerial advertising. An airship can fly all day on the same amount of fuel that a 747 uses to taxi to the runway.





## How to "Do It All"

- ☐ Utilize materials such as slides, films, videotapes, and computer programs to teach and to enhance lessons.
- ☐ Recognize areas of individual expertise by bringing in guest speakers, other unit members, or Civil Air Patrol members from other units to provide instructional support.
- ☐ Use the talents of your community.
- ☐ Enlist assistance and support from:
  - \_\_\_\_\_ Other Civil Air Patrol personnel
  - \_\_\_\_\_ National Aeronautics and Space Administration
  - \_\_\_\_\_ Federal Aviation Administration
  - \_\_\_\_\_ Community resources
  - \_\_\_\_\_ Local teachers
- ☐ Participate in aerospace education conferences for training, program strategies, and idea sharing
  - \_\_\_\_\_ National Congress on Aviation and Space Administration -- an annual educational symposium held each spring.
  - \_\_\_\_\_ Region Aerospace Education Conferences -- consult the RDAE for scheduled conferences in your area.
  - \_\_\_\_\_ Aerospace Education Seminars at wing conferences -- consult the wing Director of Aerospace Education for scheduled seminars.
  - \_\_\_\_\_ Specialized conferences, training sessions, and seminars as offered by wing and / or region aerospace education personnel.
- ☐ Participate in local educational programs
  - \_\_\_\_\_ Summer university workshops.
  - \_\_\_\_\_ Programs sponsored by local museums, science centers, Challenger Learning Centers.

## Quick Reference

### ☐ Aerospace Education Staffing

- \_\_\_\_\_ Civil Air Patrol flight or squadron / group levels
  - One Aerospace Education Officer (AEO) required
  - [Composite units may appoint two: one for cadets, one for senior members]
  - [Cadet and composite units should also assign cadet aerospace education officers to support Phase III training]
  - [Groups may also appoint Internal and External Aerospace Education Officers]
- \_\_\_\_\_ Civil Air Patrol wing level
  - Director of Aerospace Education (DAE) required
  - Internal and External Aerospace Education Officers appointed
- \_\_\_\_\_ Civil Air Patrol region level
  - Deputy Chief of Staff for Aerospace Education (DCS / AE) required
  - Internal and External Aerospace Education Officers appointed

### ☐ Aerospace Education Training / Educational Opportunities

- \_\_\_\_\_ Aerospace Education Program for Senior Members (AEPSM)
  - Successful completion earns Yeager award
- \_\_\_\_\_ Level II Specialty Track Training [215] for Aerospace Education Officers
  - Completion of Master rating earns Crossfield Aerospace Education award
- \_\_\_\_\_ Conferences / Workshops / Seminars / Symposiums
  - National Congress on Aviation and Space Education
  - Aerospace Education Leadership Development courses
  - Region Aerospace Education conferences
  - Aerospace Education Officer training workshops
  - Aerospace Education Seminars at wing conferences
  - Corporate Learning Courses / Squadron Leadership Schools

### ☐ Aerospace Education Program Components for Cadet Squadrons

- \_\_\_\_\_ Weekly Current Events Discussion
- \_\_\_\_\_ Cadet Self-Study Support
  - Group activities / group instruction
  - Assistance from other unit members
  - Mentoring by senior members; Phase III / IV cadets
  - Counseling and guidance
  - Testing
- \_\_\_\_\_ Orientation Flights
- \_\_\_\_\_ Enrichment Activities

### ☐ Aerospace Education Program Components for Senior Squadrons

- \_\_\_\_\_ Weekly Current Events Discussion
- \_\_\_\_\_ Aerospace Education Program for Senior Members
- \_\_\_\_\_ Specialty Track [215] for Aerospace Education Officers

### ☐ Aerospace Education Officer Responsibilities

- \_\_\_\_\_ Oversee unit aerospace education program
- \_\_\_\_\_ Administration of AEPSM evaluations / submit report to next higher headquarters
- \_\_\_\_\_ Submit nominations for
  - Frank G. Brewer - Civil Air Patrol Memorial Aerospace Awards
  - National Congress Crown Circle for Aerospace Education Leadership
  - A. Scott Crossfield Aerospace Education Teacher of the Year
  - Any local unit / wing / region aerospace education awards as may apply
- \_\_\_\_\_ Complete Specialty Track [215] training for Aerospace Education Officers
- \_\_\_\_\_ Complete and submit activity reports as required

## **The A. Scott Crossfield Aerospace Education Award**

### **What Is It?**

A recognition program for senior members who earn the master rating in the Aerospace Education Officer 215 Specialty Track.

### **Who May Participate?**

Any regular CAP senior member

(No Aerospace Education Members, no retired CAP members, and no CAP cadets).

### **Award Criteria**

Awarded to Aerospace Education Officers who earn the 215 Master Specialty Rating as certified by their commander (see CAPR 280-2).

### **Materials Required:**

215 Specialty Track Guide for Aerospace Education Officer (CAPP 215).

### **Procedure:**

- ★ Member completes requirements for 215 Specialty Track master rating [prerequisite: completion of technician and senior ratings].
- ★ Commander initials all checklist "evaluation Items," adds any "comments," and signs the form.
- ★ Member completes CAPF 2a (Request for Approval of Personnel Actions). In Part IV, check "A Scott Crossfield Award;" submit to NHQ CAP / ETA with "Commander's Evaluation and Rating Certification Checklist."
- ★ NHQ CAP / ETA sends A. Scott Crossfield Certificate to unit commander for appropriate presentation.

### **Step-by-Step Process for the AEO:**

- ☐ **Complete 215 Master Rating work requirements**  
\_\_\_\_ Complete all items as a candidate for the 215 Master Rating and, on "Commander's Evaluation and Rating Certification Checklist," have the commander: 1) initial all successfully completed evaluation items; 2) enter any comments; and, 3) sign and date.
- ☐ **Complete the CAPF 2a to request the A. Scott Crossfield Award**
  - \_\_\_\_ In Section I, complete all boxes
  - \_\_\_\_ In Section IV, check "A. Scott Crossfield Award"
  - \_\_\_\_ In Section VII, list dates of service as unit Aerospace Education Officer
  - \_\_\_\_ Fill in Unit Charter Number, Signature, and typed Name and Grade of Requestor
  - \_\_\_\_ Obtain signature of commander
  - \_\_\_\_ Attach 215 Master Rating "Commander's Evaluation and Rating Certification Checklist"
  - \_\_\_\_ Send to NHQ CAP / ETA

### **For members who have earned a Master rating in the 215 Specialty Track prior to 1998:**

- ☐ **Complete the CAPF 2a to request the A. Scott Crossfield Award**
  - \_\_\_\_ In Section I, complete all boxes
  - \_\_\_\_ In Section IV, check "A. Scott Crossfield Award"
  - \_\_\_\_ Fill in Unit Charter Number, Signature, and typed Name and Grade of Requestor
  - \_\_\_\_ Obtain signature of commander
  - \_\_\_\_ Attach 215 Master Rating "Commander's Evaluation and Rating Certification Checklist" if available. NOTE: No checklist was provided in the 215 Study Guide prior to 1990; as a substitute, attach any credible source document or other evidence to show the award is warranted. A copy of the unit's MML can be used as a source document. The applicant's commander is the final approval authority and will judge the merits of each application.
  - \_\_\_\_ Send to NHQ CAP / ETA

NHQ CAP / ETA will send the *A. Scott Crossfield Award Certificate* (CAPC 15) to the unit commander for presentation at a suitable occasion. Each member is then authorized to purchase the ribbon and mess dress medal from the Civil Air Patrol Bookstore. Medal and ribbon wear is in accordance with CAPM 39-1.



The X-15 was a joint Air Force, Navy, and NACA project aimed at building an aircraft that could fly at a speed of 4,500 miles per hour and reach an altitude of 25,000 feet. Three X-15s were built; flight testing began 1959 and continued through 1967. By the end of the flight-testing,, both design goals had been exceeded.

## **A e r o s p a c e   E d u c a t i o n   E x c e l l e n c e   A w a r d   P r o g r a m**

### **What Is It?**

A unit-oriented, activity-based, voluntary aerospace education unit award program.

### **Who Does It?**

The “unit” Aerospace Education Officer and the Commander jointly agree to sign up for the program and do their best to support it (Note: The term “unit” refers to any CAP organizational level from flight through region). Members of the unit do the activities and earn the award plaque for their unit. The Aerospace Education Officer (AEO) conducts the activities (or arranges for other members to do so), and the AEO forwards the activity reports to CAP National Headquarters.

### **Why Do This?**

The overall purpose of the program is to promote aerospace education in the unit while simultaneously fostering group interaction and socialization. The program rewards the unit with a professional looking certificate affixed to a very nice walnut-type plaque. The basic intent of the program is to teach members specific aerospace activity skills and encourage them to support CAP’s aerospace education mission.

### **Materials Required:**

Aerospace Education Excellence Award sign-up booklet; all volumes of AE 2000 Activity Books, and materials required to do the selected aerospace education activities.

### **Step by Step Instructions:**

☐ **Acquire the “Aerospace Education Excellence Award Program” brochure from CAP/ETA**

- \_\_\_\_ Read the “Rules” portion and determine whether the program is right for your unit.
- \_\_\_\_ Ask the unit members whether they will support the program.
- \_\_\_\_ Ask the commander whether s/he will support the program.
- \_\_\_\_ If all agree, the AEO and commander sign “The Agreement” form.

☐ **Fill out and sign “The Agreement” and send it in to NHQ CAP/ETA**

This action enrolls the unit in the Aerospace Education Excellence Award Program and authorizes it to receive the AE 2000 Activity Book volumes.

- ☐ **Plan the activities you will do over the six-month program**
  - \_\_\_\_\_ Consult with unit members to determine which activities they would like to do.
  - \_\_\_\_\_ Gather the materials needed to do the activities.
  - \_\_\_\_\_ Select "activity leaders" and task them with leading the unit members in the activities.
- ☐ **Do the activities and report them to Headquarters CAP**
  - ★ Six activities, one each month, are required over the 6-month program.
  - ★ An aerospace day, lasting at least 2 hours in duration, must be completed during the 6 months.
  - ★ Each month the AEO and commander sign and submit a report on completed activities.
- ☐ **Receive the award plaque and review your assessment of the program**
  - \_\_\_\_\_ Conduct an appropriate ceremony in recognition of successfully earning the award.
  - \_\_\_\_\_ Review your unit participation in the program and send any "recommended activities" or program comments to Headquarters CAP for future incorporation into the program.

In 1927, Charles Lindbergh asked a group of Saint Louis businessmen to sponsor his attempt to fly nonstop across the Atlantic. The money was raised and Lindbergh contracted with the Ryan Aircraft Company of San Diego to build his plane, the *Spirit of Saint Louis*. Taking off from Roosevelt Field, New York on 20 May, Lindbergh landed at Le Bourget Airport in Paris 33 1/2 hours later and instantly became a world hero.

American response was explosive and Lindbergh traveled to every state in the Union to promote civil aviation. More than any other individual, Charles Lindbergh was responsible for thousands of people entering pilot training, for hundreds of cities building airports, and for millions of American accepting aviation as important.



## **Frank G. Brewer – Civil Air Patrol Memorial Aerospace Awards**

### **What Is It?**

An annual recognition award given in five categories at both region and national levels. Established on 31 December 1959, the award serves as a memorial to Mr. Frank G. Brewer, Sr. It recognizes individuals and organizations that have made outstanding contributions to the advancement of youth in aerospace activities. Numerous Civil Air Patrol members, individuals, and organizations have been nationally honored with this award since 1960.

### **Who May Participate?**

Anyone involved in aerospace activities.

### **Award Criteria:**

Recognition is given to individuals and organizations that have made outstanding contributions to the advancement of youth in aerospace activities. Nominees are evaluated on: 1) CAP program support; 2) significance of accomplishments; 3) community involvement; and, 4) support of all facets of the aerospace education mission.

### **Materials Required:**

The *Frank G. Brewer - CAP Memorial Aerospace Award* nomination form (CAPF 25) extracted from CAPP 15, Aerospace Education Officers' Handbook, or ordered from NHQ CAP/MSA on a CAPF 8.

- ★ Attach documentation information to the Brewer nomination form.

### **Procedure:**

Any Civil Air Patrol member or unit may submit a Brewer nomination for any category.

- ★ Completed nomination packages are submitted to the Wing DAE by 15 January.
- ★ Wing sends all nomination packages to the Region DCS/AE and RDAE by 1 February.
- ★ Region DCS/AE convenes a selection board and selects the Brewer winners for the Region, then forwards the winning nomination packages to NHQ CAP/ETA by 1 March.
- ★ NHQ CAP/ETA convenes a board, and selects the national Brewer winners by 15 April. ETA notifies the winners, and presents the national Brewer Awards at the CAP Summer National Board Meeting.

### **Step by Step Instructions:**

- ☐ **Obtain the Brewer nomination form; indicate the category for the nomination**

- ☐ Category I - Civil Air Patrol Cadet member
- ☐ Category II - Civil Air Patrol Senior member
- ☐ Category III – Individual
- ☐ Category IV - Organization
- ☐ Category V - Anniversary (presented every five years, 2000, 2005, 2010, etc.)

- ☐ **Obtain permission from your prospective nominee for the nomination to be made**

☐ **Complete the nomination form, providing all requested information**

- \_\_\_\_\_ A cadet nominee must have a Mitchell Award, must be a current CAP member, and the aerospace achievement or significant contribution must be from the calendar year preceding selection.
- \_\_\_\_\_ Senior Members must be a current CAP member, should have an AEPSM Award, and the aerospace achievement or significant contribution must be from the calendar year preceding selection.
- \_\_\_\_\_ Individual (10 years), Organization (10 years) and Anniversary (20 years) nominees must have contributed significantly to the aerospace field over the continuous period of years shown above. See CAPR 280-2 for additional detailed information on each of these categories.

☐ **In narrative form, justify the nomination**

- \_\_\_\_\_ What specifically has the nominee achieved or contributed relevant to aerospace during the time period?
- \_\_\_\_\_ Why is the nominee the most deserving of the award? (This relates to the quality of the achievement or the contributions made by the nominee).

NOTE: Nominations are restricted to the form itself plus three attached pages. **Nomination packages that exceed this length will not be considered.** Reduce documentation items in size so that one page can accommodate several items (like current CAP membership card, Mitchell Award certificate, AEPSM Award certificate). Remember, you may know your nominee and his or her accomplishments well, but the nomination will be evaluated solely on the basis of what you write and what information you attach to document the nomination form.

☐ **Check your nomination package for completeness, clarity, and appearance. Image counts.**

☐ **Submit your nomination package to the Wing DAE at your Wing Headquarters**

- \_\_\_\_\_ Be sure your nomination reaches the Wing DAE prior to the 15 January deadline.

What happens next?

The Wing DAE records the number of Brewer Awards submitted for purposes of reporting this information on the Annual Wing AE Activity Report. The Wing DAE forwards all Brewer nominations from throughout the Wing to the Region DCS / AE and to the RDAE by 1 February. The DCS/AE and RDAE convene a Brewer Awards Committee to evaluate all nominations. By 1 March, the DCS/AE and RDAE jointly forward one nomination in each category to NHQ CAP/ETA for consideration for the national award in each category. The region Brewer Awards Committee may select in each category one or more region *Brewer Award* nominees as winners for local region recognition. These winners receive a Region *Brewer Award Certificate* (CAPC 25) presented at a major regional event such as the Region Aerospace Education Conference or the annual Region Conference.

A National Brewer Awards Committee will consider all nomination packages forwarded to National Headquarters. From the eight region nominees, one nominee will be chosen in each category to receive the national Brewer Award. National Headquarters will notify the winners and publish the listing of national Brewer Award winners after 15 April. The national Brewer Award plaques are presented at the Civil Air Patrol Summer National Board Meeting.

If your nominee is not chosen for recognition, you can update the information and resubmit a nomination the following year. Make certain you are following the guidelines for the nomination and that your nominee meets the stated requirements.

## THE FRANK G. BREWER - CIVIL AIR PATROL MEMORIAL AEROSPACE AWARD

The Brewer Awards are presented in commemoration of Frank G. Brewer, Sr., and his lifelong interest in aviation, youth, and education. Recognition is given to individuals and organizations that have made outstanding contributions, out of selfless devotion, to the advancement of youth in aerospace activities.

- ☐ Category I -- CAP Cadet                      ☐ Category II -- CAP Senior Member                      ☐ Category III -- Individual  
☐ Category IV -- Organization                      ☐ Category V -- Anniversary [submit every fifth year only -- see back]

NOMINEE / ORGANIZATION [Last Name, First Name, Initial]			Home Address (Street Number, City, State, Zip Code)		
Home Telephone Number			FAX Number		E-mail Address
CAP Serial Number If current CAP member	Date Joined CAP	CAP Grade	Unit Charter Number	Date Mitchell Award Earned <b>OR</b> Date of Yeager Award	
JUSTIFICATION [Continue on reverse]:                    					
Nominated by _____ (Printed / Typed Name)			_____ (Signature)		
Nominator's Relationship to the Nominee _____ Professional			_____ Personal		
Nominator's Address _____ CityStateZip Code					
Telephone _____ BusinessResidence		_____ FAX		_____ E-Mail Address	

CAPF 25, DEC 99

PREVIOUS EDITIONS WILL NOT BE USED

OPR / ROUTING: ETA



**NOMINATION PACKAGE MAY NOT EXCEED FOUR SHEETS -- THIS FORM, PLUS THREE ATTACHED DOCUMENTATION SHEETS.** Nomination packages exceeding this length will not be considered.

**CATEGORY I -- CAP CADET:** Nominee must have earned the Billy Mitchell Award and must be a current Civil Air Patrol member. The nomination should include a strong justification that supports an outstanding aerospace achievement or significant contribution to the aerospace field during the calendar year preceding the selection. Nominations must adhere to calendar year requirement to be considered.

**CATEGORY II -- CAP SENIOR MEMBER:** Nominee must have earned the Yeager Award and must be a current Civil Air Patrol member. The nomination should include a strong justification that supports an outstanding aerospace achievement or significant contribution to the aerospace field during the calendar year preceding the selection. Nominations must adhere to calendar year requirement in order to be considered for the award

**CATEGORY III -- INDIVIDUAL:** Nominees may include educators, state aviation officials, fixed base operators, state superintendents of public instruction, members of the armed forces, members of Congress, or other individuals who have performed a noteworthy aerospace achievement or made significant contributions to the aerospace field over a continuous period of up to ten years.

**CATEGORY IV -- ORGANIZATION:** Nominees may include elementary or secondary schools, colleges and universities, airlines, aircraft industries, flying schools, governmental agencies, associations, or other organizations which have contributed significantly to the aerospace field over a continuous period of up to ten years.

**CATEGORY V -- ANNIVERSARY AWARD -- Presented every five years -- 2000, 2005, 2010, etc.:** Nominees may include Civil Air Patrol members, educators, state aviation officials, fixed base operators, state superintendents of public instruction, members of the armed forces, members of Congress, or other individuals who have performed a noteworthy aerospace achievement or made significant contributions to the aerospace field for a period of more than twenty years.

JUSTIFICATION [continued]:

## **National Congress on Aviation and Space Education Crown Circle for Aerospace Education Leadership Award**

### **What Is It?**

Established in 1979 to recognize demonstrated performance of outstanding leadership in aerospace education, it is one of the highest awards in aerospace education worldwide.

### **Who May Participate?:**

Anyone involved in aerospace education.

### **Award Criteria:**

Nominees must have:

- 1) Demonstrated involvement in and commitment to aerospace education.
- 2) Outstanding leadership in aerospace education, locally, nationally, internationally.
- 3) Performance over an extended term (years), at a high level, and of great quality.

### **Materials Required:**

Crown Circle nomination form (look in CAPP 15) or ask NHQ CAP/ETA for a copy.

Documentation information (pictures, awards, articles) to attach to the nomination narrative.

Biographical sketch of nominee and Photo of nominee (5"x7"), [close-up head and shoulders]

### **Procedure:**

- ★ Anyone may complete a typewritten, documented nomination package.
- ★ Nominee must authorize submission of the nomination and, if chosen, attend the induction ceremony.
- ★ Completed nomination packages are submitted to NHQ CAP/ETA postmarked by 1 January.

### **Step-by-Step Instructions:**

- ☐ **Determine if you have a potential Crown Circle nominee**
- ☐ **Obtain Crown Circle nomination form**
  - \_\_\_\_\_ Write to NHQ CAP/ETA to request a Crown Circle nomination form or find the form in CAPP 15.
  - \_\_\_\_\_ Forms are routinely published each fall in the National Congress registration flyer.
- ☐ **Obtain permission from your prospective nominee to submit the nomination; and ensure your nominee will be present for the award ceremony if chosen for induction into the Crown Circle.**
- ☐ **Complete the nomination form, providing all requested information**
- ☐ **In narrative form, justify the nomination**
  - \_\_\_\_\_ What has the nominee accomplished relevant to aerospace?
  - \_\_\_\_\_ Why is the nominee deserving of the award?

NOTE: Nomination packages are not restricted in size. Generally, Crown Circle nominations are compiled in a notebook and include copies of all supporting documentation relevant to the nomination. Remember, you may know your nominee and his or her accomplishments well, but the nomination will be evaluated solely on the basis of what you write and what information you include in the nomination package. Items to consider include

- \_\_\_\_\_ newspaper articles
- \_\_\_\_\_ photographs of nominee doing his/her aerospace work
- \_\_\_\_\_ copies of award certificates
- \_\_\_\_\_ letters of support / recommendation

☐ **Check your nomination package for completeness, clarity, and appearance. Image counts. Be sure you have included a photograph of your nominee (5x7 close-up head and shoulder), suitable for reproduction in the National Congress program book and a biographical sketch of the nominee.**

☐ **Submit your nomination package to NHQ CAP, Aerospace Education Division :**  
\_\_\_\_\_ Ensure that your nomination package is postmarked by the 1 January deadline.

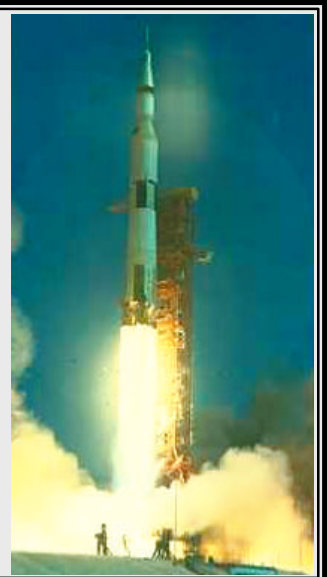
What happens next?:

NHQ CAP convenes a committee to evaluate all correctly submitted nominations. Nominations with postmarks after the 1 January deadline or lacking photo or biographical sketch will be returned and will not be considered. There is no set number of Crown Circle nominees that may be chosen each year for induction into the Crown Circle. The committee generally selects between three and five winners each year. Crown Circle Award winners are notified by NHQ CAP/ETA and are invited as guests to participate in their induction ceremony during the National Congress on Aviation and Space Education Crown Circle Awards banquet (usually on Friday evening of the Congress). Nominees inducted into the Crown Circle receive a plaque and the Crown Circle pin.

If your nominee is not chosen for recognition, you can update the information and resubmit the nomination package the following year. Make certain you are following the nomination guidelines and that your nominee meets all of the requirements.

"There can be no thought of finishing [high altitude research], for 'aiming at the stars,' both literally and figuratively, is a problem to occupy generations, so that no matter how much progress one makes, there is always the thrill of just beginning. . . ."

-- Robert H. Goddard  
The Father of Modern Rocketry



# The National Congress on Aviation and Space Education Crown Circle for Aerospace Education Leadership



Nominees for induction into the National Congress on Aviation and Space Education Crown Circle for Aerospace Education Leadership are accepted and considered by the Congress Director and a select committee, which will also be the selection authority. Any individual, organization, association, college, university, school system, governmental agency, or industry may be nominated for this honor. Anyone may submit a nomination.

Nominees are evaluated according to the following criteria:

- ✓ Demonstrated involvement in, and commitment to, aerospace education
- ✓ Outstanding leadership in aerospace education, locally, nationally, or internationally
- ✓ Performance over an extended term (years), at a high level, and of great quality.

Nominations must be typewritten, documented, and have the approval of the nominee. The nominees must agree to be present for the award ceremony if chosen for induction. Accompanying the nomination should be a biographical sketch and a black-and-white photograph of the nominee.

Nominations should be submitted to:

National Congress on Aviation and Space Education / National Headquarters, Civil Air Patrol  
105 South Hansell Street / Building 714, Maxwell Air Force Base, Alabama 36112-6332

**NOMINATIONS MUST BE POSTMARKED BY JANUARY 1**

I NOMINATE

---

Name and Title of the Nominee  
for induction in the  
**National Congress Crown Circle for Aerospace Education Leadership**

NOMINEE'S NAME AND ADDRESS (Street Number, City, State, Zip Code)

RESIDENCE TELEPHONE

OFFICE TELEPHONE

FAX NUMBER

E-MAIL

JUSTIFICATION (Continue on 8-1/2 X 11 plain bond)

Nominated by \_\_\_\_\_ Signature

\_\_\_\_\_  
Printed/Typed Name

Nominator's Address

\_\_\_\_\_  
City

\_\_\_\_\_  
State

\_\_\_\_\_  
Zip Code

Telephone \_\_\_\_\_

Business

Residence

FAX

E-Mail Address

Crown Circle Nomination Form

## **The A. Scott Crossfield Aerospace Education Teacher of the Year Award**

### **What Is It?**

This is an annual award to recognize aerospace education teachers for outstanding accomplishments in aerospace education and for possessing those honorable attributes expected of American educators. Established in 1986 by aviation pioneer A. Scott Crossfield, the award recognizes a classroom teacher who: 1) uses aerospace education to teach traditional subjects or, 2) teaches aerospace education as a separate subject or, 3) uses aerospace education to enrich the teaching of traditional subjects.

### **Who May Participate?**

Any classroom teacher, grades kindergarten through twelve, public, private, or parochial.

### **Award Criteria:**

A classroom teacher grades kindergarten through twelfth who: 1) sets high standards for their students and demands excellence from their students' performance; 2) strives to improve their personal academic competence and teaching ability; 3) performs teaching duties in an exemplary manner resulting in admiration by their students; 4) demonstrates creativity in developing and utilizing materials to enhance the teaching of aerospace; and, 5) maximizes student involvement through classroom activities to improve student learning. This award also recognizes a teacher who creates and develops a one-time project or program of such significance that it has a major impact on the teaching of aerospace education.

### **Award Elements:**

The A. Scott Crossfield Aerospace Education Teacher of the Year Award consists of: 1) a \$1000 cash stipend; 2) membership in National Congress Crown Circle for Aerospace Education Leadership; and, 3) free room and registration at all future National Congresses on Aviation and Space Education.

### **Materials Required:**

A. Scott Crossfield Aerospace Education Teacher of the Year nomination form  
(published in CAPP 15).

Required attachments and documentation information.

### **Procedure:**

- ★ Anyone may complete and submit a nomination package to NHQ CAP/ETA
- ★ Nomination packages must be received no later than 1 February.

### **Step by Step Instructions:**

- ☐ **Determine if you have a potential Crossfield Teacher of the Year nominee.**
- ☐ **Obtain the Crossfield Teacher of the Year nomination form.**
  - \_\_\_\_\_ Find form in CAPP 15 or write NHQ CAP/ETA for the nomination form.
  - \_\_\_\_\_ Forms are routinely published in National Congress information brochure each fall.
- ☐ **Obtain permission for the nomination from your prospective nominee.**

☐ **Complete the nomination form, providing all requested information.**

☐ **In letter form, justify the nomination and include required attachments.**

- \_\_\_\_\_ Explain why your nominee is deserving of this award.
- \_\_\_\_\_ Obtain a letter of endorsement, on school letterhead, from the teacher's school principal.
- \_\_\_\_\_ List nominee's previous teaching positions, include school name(s), dates, grade level(s) and / or disciplines.
- \_\_\_\_\_ List nominee's honors and awards.
- \_\_\_\_\_ Provide a synopsis (250 words maximum) of your nominee's efforts toward self-improvement.
- \_\_\_\_\_ Provide a synopsis (250 words maximum) of your nominee's community involvement.

NOTE: Nomination packages are not restricted in size. Generally, Crossfield Teacher of the Year nominations are put together in a notebook and include copies of all supporting documentation relevant to the nomination. Remember, you may know your nominee and his or her accomplishments, but the nomination will be evaluated solely on the basis of what you write and what information you include in the nomination package. Items to consider are:

- \_\_\_\_\_ Newspaper articles.
- \_\_\_\_\_ Photographs of nominee doing aerospace activities with students.
- \_\_\_\_\_ Copies of award certificates.
- \_\_\_\_\_ Letters of support / recommendation.

☐ **Check your nomination package for completeness, clarity, and appearance. Image counts. Be sure you have included a photograph (5 X 7 head and shoulder close-up) of your nominee, suitable for reproduction in the National Congress program book. Also, include a biographical sketch of the nominee.**

☐ **Submit your nomination package to Headquarters Civil Air Patrol, Aerospace Education Division.**

- \_\_\_\_\_ Ensure that your nomination package is received prior to the 1 February deadline.

What happens next?:

Mr. Crossfield and a committee evaluate all of the nominations submitted. Nominations received after the 1 February deadline will be returned and will not be considered. The selected A. Scott Crossfield Aerospace Education Teacher of the Year will be notified prior to the National Congress and invited to the National Congress to receive the award. The award is made during the General Assembly portion of the National Congress on Aviation and Space Education. The Crossfield Teacher is also inducted into the National Congress Crown Circle for Aerospace Education Leadership. The Crown Circle induction ceremony takes place at the National Congress Awards banquet, usually on Friday evening of the Congress. The National Congress on Aviation and Space Education location and dates change each year.

If your nominee is not chosen for recognition, you can update the information and re-submit the nomination the following year. Make certain you are following the guidelines for the nomination and that your nominee meets all of the requirements for this extremely coveted award.



## A. Scott Crossfield

### To the Classroom Teachers of America:

It is again time to announce that nominations for the A. Scott Crossfield Aerospace Education Teacher of the Year Award are open. This award for a classroom teacher is in memory of the public school teachers who so wondrously influenced my whole life. It is dedicated to the past recipients, who in addition to having proven their dedication and worth to aerospace education, have all gone on to greater contributions of major significance. The objective is to recognize and reward aerospace education teachers for outstanding accomplishments in aerospace education and for their dedication to the students they teach.

Our aerospace future is in today's classrooms in your hands. This we honor.

With warmest regards and respect ,

A handwritten signature in blue ink, appearing to read "A. Scott Crossfield".

### NOMINATION FORM

**PURPOSE:** The A. Scott Crossfield Aerospace Education Teacher of the Year Award (the Crossfield Award) is presented annually to recognize and reward aerospace education teachers for outstanding accomplishments in aerospace education and for possessing those honorable attributes we expect from American teachers.

**AWARD ELEMENTS:** The Crossfield Award consists of a \$1,000.00 cash stipend, membership in the Crown Circle of the National Congress on Aviation and Space Education, and free room and registration at all future National Congresses on Aviation and Space Education.

**CRITERIA:** Nominees must be classroom teachers from grades kindergarten through twelfth from any public, private, or parochial school who either teach aerospace education\* as a subject or use aerospace education to enrich the teaching of traditional subjects. Although the Crossfield Award is an annual award presented to a teacher, the accomplishments of the nominee need not be limited to the year for which the award is given. The award recognizes dedicated and talented aerospace education teachers who:

1. Set high standards for students and demand excellence in student performance.
2. Strive to improve their personal academic competence and teaching ability.
3. Perform their teaching duties in an exemplary manner, resulting in admiration by students
4. Demonstrate creativity in developing and utilizing materials to enhance the teaching of aerospace.
5. Maximize student involvement and classroom activities to improve student learning or create and develop a one-time project or program of such significance that it has a major impact on the teaching of aerospace education.

\* **Aerospace Education is that branch of general education concerned with communicating knowledge, skills, and attitudes about aerospace activities and the total impact of air and space vehicles upon society.**

Complete the form on the next page as instructed; mail with completed package as directed.

# I NOMINATE

-----  
Name and Title of the Nominee

for selection as the

***A. SCOTT CROSSFIELD AEROSPACE EDUCATION TEACHER OF THE YEAR***

NOMINEE -- LAST NAME - FIRST NAME - INITIAL		ADDRESS	
RESIDENCE TELEPHONE	OFFICE TELEPHONE	FAX	E-Mail Address
FORMAL EDUCATION COLLEGE / UNIVERSITY	DATES ATTENDED	DEGREE	FIELD OF STUDY
PRESENT OCCUPATION (Provide Title, Name and Address of School, Grade Level and / or Discipline)			
Nominated by _____		_____	
Printed / Typed Name and Title		Signature	
Nominator's Address _____			
City		State	Zip Code
Telephone _____			
Business	Residence	FAX	E-mail Address
<p>On separate letterhead stationery or continuation sheet, please provide the following essential nominee information. Keeping in mind the selection criteria, attach any additional documentation and / or materials you choose to enhance the nomination:</p> <ol style="list-style-type: none"> <li>1. Your personal letter describing why your nominee deserves to receive this award.</li> <li>2. A letter of endorsement of your nominee by their school principal, on school letterhead.</li> <li>3. List your nominee's previous teaching positions, including schools, dates, levels and / or disciplines.</li> <li>4. Honors and Awards received by your nominee.</li> <li>5. A synopsis (250 words maximum) of your nominee's efforts toward self-improvement.</li> <li>6. A synopsis (250 words maximum) of your nominee's community involvement.</li> </ol> <p>Complete this package and mail to: A. Scott Crossfield Aerospace Education Teacher of the Year Headquarters, Civil Air Patrol / ETA 105 South Hansell Street / Building 714 Maxwell Air Force Base, Alabama 36112-6332</p>			

Nomination packages must be received not later than 1 February



## **Reporting Periodically to the Commander on the Unit Aerospace Education Program**

### **What Is It?**

A requirement of CAP Regulation 280-2. The Aerospace Education periodic report to the commander exists for all levels of command from the unit through the region.

### **Who Does It?**

The Aerospace Education Officer or any other individual doing the aerospace education duty in the unit.

### **Why Do This?**

To communicate to the commander and the other unit staff members what is planned and what is being accomplished in aerospace education in the unit.

### **Step by Step Instructions:**

#### ☐ **Determine what you are going to “report”**

\_\_\_\_\_ What does the commander need to know?

\_\_\_\_\_ What should you accomplish before you involve the commander?

#### ☐ **Break the report down into sections**

\_\_\_\_\_ Actions required by the commander – Approval of AE Plan of Action for the unit, Certification of the Annual AE Activity Report for the unit, Approval of discretionary programs such as Aerospace Education Excellence Award, Assignment of personnel to unit AE staff positions.

\_\_\_\_\_ Assess progress in the mandatory portion of cadet AE programs in the unit – Support for cadet study of AE material, AE test scheduling, AE test results, pass-fail rates, AE mentoring by Phase III cadets, AE instruction by Phase IV cadets.

\_\_\_\_\_ Progress in discretionary AE programs: AEPSM/ Yeager Award study groups and testing for seniors; completion of AE 2000 activities for AE Excellence Award; senior members enrolled in 215 Specialty Track and their progress or completion; nominations for awards such as Brewer, Crown Circle, Crossfield AE Teacher of the Year; outreach AE programs, events, activities with schools, community groups, or other aerospace organizations.

\_\_\_\_\_ Plans for the future – AE ideas which have been sufficiently considered and researched so the commander and any attending staff can “buy-in” to execution of the plan.

#### ☐ **Present the report “professionally”**

\_\_\_\_\_ Facts are facts – Tell the commander the facts. Why? Because the commander needs to know both the good news as well as the bad.

\_\_\_\_\_ Discuss AE programs in terms of “GOALS”. If the unit has no one qualified in any 215 AEO Specialty Track rating, establish the goal of enrolling the unit AEO in the 215 track and completing the technician rating in the prescribed time. If the cadets have a 70 percent fail rate on first-time testing in an AE chapter, set a goal of increasing the first-time pass rate to some reasonable percentage and identify how you are going to support the AE teaching program.

\_\_\_\_\_ Directly ask for “buy-in” support and commitment from the commander and staff. When the commander and staff “buy-in” they incur accountability in the AE program. Commitment and accountability are essential.

- \_\_\_\_\_ Praise in public. If an AE success has occurred report it to the commander and ask for the commander to present the AE recognition at a mass gathering of the unit (and with any outside group, if the AE event was a joint venture).
- \_\_\_\_\_ Complain in private. If your periodic AE report states that the unit has no aerospace activities, point this out to the commander in private while publicly encouraging support for a unit AE plan of action.

☐ **Document in writing what you report verbally**

- \_\_\_\_\_ Documentation should be informal and “a reminder” to you. The notes will help you remember suspense dates, identify “who said what or promised what” at a meeting, and provides a continuing record of AE activity in the unit. This documentation will also help your successor.
- \_\_\_\_\_ Use the documentation as an educational tool for new AEOs and for performance verification during unit inspections.

NOTE: The above is a ***proposed*** method for periodic AE reporting to your commander and the unit staff. You are encouraged to adapt it to your particular circumstances. The objective is to provide information and help plan for the future.

Two Englishmen built the first wind tunnel in 1871; F. H. Wenham, a marine engineer whose study of birds led him to aerodynamics, was the first to use the wind tunnel to experimentation with wing shapes.

The Wright brothers used hand-built wind tunnels -- the first of which was made from an old starch box -- to test wing shapes.

In 1926, the Daniel Guggenheim Fund for the Promotion of Aeronautics provided grants for several universities to build their own experimental wind tunnels. It was a huge boon to aviation. The largest wind tunnel in the world is located at NASA's Ames Research Center, Moffett Field, California. The test section of the National Full-Scale Aerodynamics Complex measures 80 feet by 100 feet.



## Wing Aerospace Education Plan of Action

### What Is It?

A yearly plan for conducting Aerospace Education at wing level. [All units below wing level are encouraged to develop a similar yearly plan.] The plan sets goals, provides for recording results and uses the results to produce the metrics for the annual AE Activity Report.

### Who Does It?

The wing DAE prepares the plan after reviewing the current program and getting input from unit AEOs and the Wing Commander.

### Format

In writing and signed by wing commander and wing director of aerospace education.

### Components:

- I. Aerospace Education Officer - Staffing — Build a roster or chart.
  - A. List all wing and subordinate units, and list the name and information of each assigned AEO [partial example shown below]:

Unit	Charter	CAPSN	Rank	AEO Name	Street	City	State	Zip	Telephone	E-Mail	Appointed	Rating	Yeager
NER	01	111223333	Capt	Mike Jones	6 Ash Drive	Rome	NY	12345-1234	202-345-6789	MJ1@net.net	13 July 98	215S	Yes
NER	44	999887777	Major	Bill Smith	4 Cherry Ave	Ithaca	NY	12543-1234	132-456-7890	9sm@net.net	11 June 92	215T	Yes
NER	84	231654087	1 Lt	Bob Riley	24 Maple St.	Alfred	NY	12987-1234	231-654-0987	bil46@net.net	1 May 97	None	No

- B. Identify all unfilled and soon to be vacant AEO positions.
- C. Consult with unit commander(s) regarding plans to fill the vacancies and soon to be vacant AEO positions. [Unit commanders are responsible for staffing, but the Wing DAE should address a plan for filling vacant AEO positions at subordinate units. Commanders may seek a consultation with the DAE or may ask for recommendations; if this occurs, the DAE should be prepared to consult with the commander in a professional manner.]
- D. Develop with the unit commander(s) a plan to select, meet, and train new unit AEOs.
- E. Consolidate: Information on AEO staffing, plans to fill vacancies and soon to be vacant AEO positions, and the plan to train new AEOs. Present to the wing commander for approval.
- F. Adjust plan based on wing commander directions. Finalize AEO staffing and training plan.

### NOTES:

**Assigning:** Always pick the best person for the job. Willingness, attitude, and energy count for a lot. Seek commitment before the assignment. "I'll try" is the first step for a nominee. Actually trying once in the job is the second step. Success through commander support, membership participation, and effective AEO training keeps the steps moving forward.

**Meeting:** Every new AEO needs to "join the fraternity." When a new AEO is appointed, be sure to call, E-mail, or visit immediately.

**Training:** All AEO staff members regularly require training because regulations change, new programs emerge, job assignments change, and the people in the unit change. Plan to have training sessions regularly. Identify experts to conduct the sessions. Schedule for maximum attendance and timely presentation of information. Unit visits, wing conferences, aerospace education retreats, wing seminars, unit meetings are all excellent times to train.

\* NOTE: Outlined below are the major categories of planning for aerospace education in the wing. To simplify the wing DAE's submission of the Plan of Action to the Wing Commander, simply duplicate this checklist and check "yes" or "no" regarding activities being planned.

## II. Aerospace Education –Internal Program -- Break Into elements — Set Goals, Develop Metrics.

### A. Information Distribution

1. Bulletin Board \_\_\_\_ Yes \_\_\_\_ No  
(See "How To Develop an Aerospace Education Bulletin Board").
2. Unit AE Newsletter \_\_\_\_ Yes \_\_\_\_ No  
(Consider Frequency, Distribution, Funding, Topic Areas).
3. AE Articles \_\_\_\_ Yes \_\_\_\_ No  
(Who writes them, where are they published, what topics are covered, and how many articles are produced in a year?).
4. Web Page \_\_\_\_ Yes \_\_\_\_ No  
(Who prepares it, what material is posted, what is the update frequency, and are there links?).

### B. Monitoring Programs

1. Unit Visits  
(Minimum of four annually by Wing AE staff. See "Conducting a Unit Visit").
2. Cadet Aerospace Education in the Units (AE achievement progression, AE counselors, AE current events, AE in encampments, AE in National Cadet Competition Team preparation, AE scholarships, Brewer Award nominations, AE Excellence Award, and other unit AE activities).
3. Senior Aerospace Education in the units (AEPSM "Yeager" completions, 215 Specialty Track candidates, A. Scott Crossfield Awards, AE scholarships, Brewer Award nominations, AE Excellence Award, and other unit AE activities).

### C. Meetings

1. Wing Conference, AE Seminar(s) \_\_\_\_ Yes \_\_\_\_ No
2. Wing AE Workshops \_\_\_\_ Yes \_\_\_\_ No

### D. Reports and Award Processing

1. AEPSM (From units, to National Headquarters/ETA, Certificates to unit -- monthly).
2. Brewer Awards (All categories, to Region DCS/AE NLT 1 February).  
Scholarship Applications (from unit individuals direct to National Headquarters/CP, NLT 1 October).
3. Activity Report (See "AE Activity Report –Wing" in this handbook) Due 15 January to WG/CC, Region DCS/AE, RDAE).
4. Periodic Update Reports (Status of AE plan, Activities planned or done, AE issues needing resolution, present to wing staff at meetings and to WG/CC, Region DCS/AE, RDAE).

## III. Aerospace Education –External Program - Break into elements —Set Goals, Develop Metrics

### A. Initiative Programs

1. Elementary Schools \_\_\_\_ Yes \_\_\_\_ No  
(Purpose, resources provided).
2. Middle Schools \_\_\_\_ Yes \_\_\_\_ No  
(Purpose, resources provided).
3. High Schools \_\_\_\_ Yes \_\_\_\_ No  
(Purpose, resources provided).

4. College and Universities \_\_\_\_ Yes \_\_\_\_ No  
(Purpose, resources provided).
5. Other Organizations, Associations, Clubs \_\_\_\_ Yes \_\_\_\_ No  
(Purpose, resources provided).
6. National Congress on Aviation and Space Education  
(Presenters, Attendees).
7. AE Workshops \_\_\_\_ Yes \_\_\_\_ No  
(Purpose, when, where, funds, materials, audience).

B. Partnerships/Coordination

1. Department of Aviation and / or FAA \_\_\_\_ Yes \_\_\_\_ No  
(Purpose, resources provided).
2. Department of Education \_\_\_\_ Yes \_\_\_\_ No  
(Purpose, resources provided).
3. NASA \_\_\_\_ Yes \_\_\_\_ No  
(Purpose, resources provided).
4. Public Affairs (CAP) \_\_\_\_ Yes \_\_\_\_ No  
(Purpose, resources provided).

C. Awards

1. Crown Circle for Aerospace Education Leadership \_\_\_\_ Yes \_\_\_\_ No  
(Number nominated, winner(s), due 1 January to NHQ CAP/ETA).
2. A. Scott Crossfield Aerospace Education Teacher of the Year \_\_\_\_ Yes \_\_\_\_ No  
(Number nominated, winner(s), due 1 February to NHQ CAP/ETA).
3. Frank G. Brewer-Civil Air Patrol Memorial Aerospace Awards \_\_\_\_ Yes \_\_\_\_ No  
(Number nominated, winner(s), due 1 February Region DCS/AE).

Report Distribution: One copy each to Wing Commander, Wing DAE, Wing Liaison Office, Region (Attn: DCS/AE and commander), RDAE, each unit (Attn: AEO and commander), file.

NOTES:

**Shaping Plan:** Consider what the wing is doing in aerospace education. What does the membership want? What does the commander want? Consider resources, i.e. money, facilities, materials, people, and time involved.

**Writing Plan:** Clearly state your goal. For example, a goal of twenty senior members in the wing to complete AEPSM and earn the "Yeager" this year. Write goals the wing commander and wing membership agree to pursue. The final plan will be the standard you are measured against.

**Reporting Plan Status / Results:** In periodic and final reports, deal with the facts. Present the goal(s) and present the status/results. If appropriate, discuss issues associated with achieving the goal(s).

**Assessment:** The *CAP Wing Assessment Guide*, Tab C, Aerospace Education, published by HQ CAP-USAF/IG provides the assessment questions that are used by the inspector general to determine the quality of a wing aerospace education program. When building the wing plan, consider how the wing aerospace education program will be assessed. Build the plan to ensure success during a wing evaluation.

# AEROSPACE EDUCATION MASTER SUSPENSE SCHEDULE

SQUADRON / FLIGHT		WING	REGION
EACH MONTH	<b>AEO Periodic Update Report</b> to Squadron CC, Wing DAE  <b>Aerospace 2000 Activity Report</b> to HQ CAP/ETA each month, January through June	<b>DAE Periodic Update Report</b> to Wing CC, DCS/AE, Sqdn AEOs  <b>Aerospace 2000 Activity Report</b> to HQ CAP/ETA each month, January through June  <b>AEPSM Monthly Certification Report</b> CAPF 127 to HQ CAP/ETA	<b>DCS/AE Periodic Update Report</b> to Region CC, RDAE, Wing DAEs  <b>Aerospace 2000 Activity Report</b> to HQ CAP/ETA each month, January through June
JANUARY	<b>1 January</b> National Congress Crown Circle nominations to HQ CAP/ETA  <b>15 January</b> Brewer Award nominations to Wing DAE	<b>1 January</b> National Congress Crown Circle nominations to HQ CAP/ETA  <b>15 January</b> Wing –Aerospace Education Activity Report to Wing CC, DCS/AE, RDAE  <b>Updated Wing AEO Roster</b> to DCS/AE	<b>1 January</b> National Congress Crown Circle nominations to HQ CAP/ETA  <b>31 January</b> Region –Aerospace Education Activity Report to Region CC / RDAE  <b>Updated Wings’ AEO Rosters</b> to RDAE and HQ CAP/ETA
FEBRUARY	<b>1 February</b> National Congress Crossfield Teacher nominations to HQ CAP/ETA	<b>1 February</b> National Congress Crossfield Teacher nominations to HQ CAP/ETA  <b>Draft Annual Wing Plan of Action</b> to DCS/AE, RDAE  <b>Brewer Award</b> nominations to DCS/AE, RDAE	<b>1 February</b> National Congress Crossfield Teacher nominations to HQ CAP/ETA  <b>15 February</b> Review Wings’ Plans of Action comments to each Wing DAE  <b>Draft Annual Region Plan of Action</b> to Region CC, RDAE
MARCH		<b>1 March</b> Approved Wing Plan of Action to DCS/AE, RDAE	<b>1 March</b> Brewer Award nominations from RDAE-DCS/AE team to HQ CAP/ETA  <b>Aerospace Education Workshop</b> Listings to RDAE  <b>15 March</b> Approved Region Plan of Action to Region CC, RDAE
<b>April - May - June</b> No specific requirements other than those listed for Each Month at the top of the Suspense Schedule			
JULY		<b>1 July</b> Updated Wing AEO Roster to DCS/AE	<b>31 July</b> Updated Wings’ AEO Rosters to RDAE and to HQ CAP/ETA
<b>August - September - October - November</b> No specific requirements other than those listed for Each Month at the top of the Suspense Schedule			
DECEMBER	<b>15 December</b> Squadron -Aerospace Education Activity Report to Squadron CC, Wing DAE	<b>1 December</b> Report on Wing Plan of Action to Wing Commander, DCS/AE	<b>1 December</b> Report on Region Plan of Action to Region Commander, RDAE

## Squadron Aerospace Education Activity Report

### What Is It?

A method of recording aerospace education program actions at the squadron level and reporting this information to the squadron commander and the Wing DAE.

### Who Does It?

The squadron Aerospace Education Officer.

### Why Do This?

This information assists the Wing DAE in:

- 1) Compiling aerospace education program information which is required for assessing aerospace education activities in the wing;
- 2) Evaluating wing aerospace education performance as measured against the annual Wing Aerospace Education Plan of Action goals, and
- 3) Preparing the Wing Aerospace Education Activity Report which serves as the official annual record of the wing's aerospace education program and the basis for earning a region or national Aerospace Education Mission Award.

### Materials Required

Squadron -- Aerospace Education Activity Report form (found in CAPP 15).  
-- Copies of squadron aerospace education records and data.

### Procedure

Complete Squadron Aerospace Education Activity Report form.  
Submit to Squadron Commander and to Wing DAE.

### Step by-Step Instructions:

- ☐ **Obtain the report form and study it to determine information needed to complete it.**

\_\_\_\_ Form is published in CAPP 15, *Aerospace Education Officers' Handbook*.

- ☐ **Gather information required to complete the report.**

\_\_\_\_ AEPSM (Yeagers), 215 Specialty Track, Cadet AE counselor support, Attendance at AE Conferences, Wing/Region Conference AE seminar, AE workshops, National Congress on Aviation and Space Education, Support to schools and AEM interactions, Support to outside organizations and groups, Special squadron AE activities and AE Excellence Award participation, Squadron AE current events discussion program, Brewer Award nominations, Crossfield Teacher Award nominations, Crown Circle Award nominations, Squadron AE resources, bulletin board and resource center program. (Note: Having a notebook or set of files covering each of these areas and keeping notes and records as events occur will make the end-of-year report easier to complete.)

\_\_\_\_ Verify accuracy of the information

- ☐ **Fill in squadron name, charter number, and period the report covers.**

- ☐ Fill in your information as unit AEO [name, CAPSN, date you were assigned as squadron AEO, address, telephone number(s), e-mail, and (if appropriate) your 215 rating, your Yeager Award date, and date your squadron commander received the Yeager Award.
- ☐ Brief narrative providing information regarding your unit AEPSM program (this year).  
     \_\_\_\_ How do you encourage and assist squadron senior members to complete the AEPSM (classes/instructors/kits/self study)?  
     \_\_\_\_ How many senior members completed AEPSM and earned the Yeager Award this year?  
     \_\_\_\_ How many senior members are in the squadron and how many have the Yeager Award?
- ☐ Brief narrative providing information regarding your unit 215 Specialty Track program (this year).  
     \_\_\_\_ How do you encourage and assist squadron senior members to complete the 215 Specialty Track (recruit/train)?  
     \_\_\_\_ How many are enrolled in the 215 specialty track rating? How many completed a 215 specialty track rating?  
     \_\_\_\_ How many senior members are in the squadron and how many of that total have the 215 T, 215 S, 215 M rating?
- ☐ Provide the number of cadet aerospace education counselors in your unit.  
     [A senior member or Phase III or IV cadet.]
- ☐ Respond "yes" or "no" to your attendance at: wing conferences / aerospace education seminars / region aerospace education conferences / the National Congress on Aviation and Space Education.  
     \_\_\_\_ List dates, location of each on the back of the form or on an attached sheet.
- ☐ Report number of AE programs your unit members conducted in local school(s) aerospace education programs.  
     \_\_\_\_ List type of AE program, squadron presenter(s), school name, address, contact person, and date of activity on back of form or on attached sheet.
- ☐ List names of all community groups and organizations that you or any squadron member addressed or worked with to support aerospace education programs during the year.  
     \_\_\_\_ List AE activity, location, name of group, contact person, squadron presenter(s) and date on the back of the form or on an attached sheet.
- ☐ List all internal aerospace education activities the squadron has been involved in during the calendar year.  
     \_\_\_\_ Examples include guest speakers, field trips, model rocketry events, quiz bowl/trivia competitions, model airplanes events, special flight opportunities, visit to aerospace industry, Aerospace Education Excellence Award program activities, air shows, fly-ins,



etc. Document by recording the activity, presenter/group leader(s), date, and any special remarks on the back of the form or on an attached sheet.

- ☐ **Respond "yes" or "no" to conducting aerospace current events discussions at unit meetings.**

\_\_\_\_\_ How many times did the squadron meet this year? At how many of these meetings were aerospace current event discussions conducted? What were sources of the current events information?

- ☐ **Briefly describe contacts you have with the Wing DAE (action plans, award nominations, reports, etc).**

- ☐ **Briefly describe AE support resources in the squadron (bulletin board, resource center, AE instructors).**

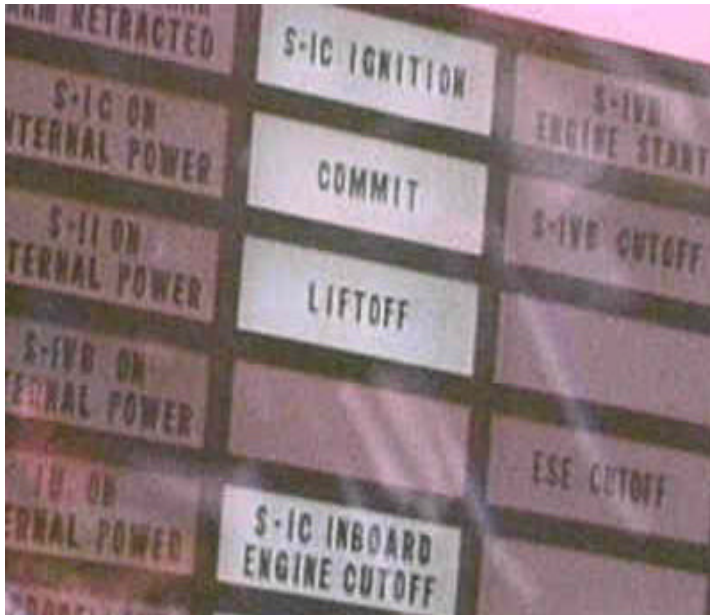
- ☐ **Sign and obtain the signature of the squadron commander.**

- ☐ **Submit annual report by 15 December to Wing DAE – be certain to maintain a file copy of the complete report.**

\_\_\_\_\_ Provide copy of signed report to the squadron commander.

\_\_\_\_\_ If you have a group Aerospace Education Officer, provide a copy of the report for the group AEO's files.

Space Shuttle pilots who are in training for a specific mission receive intensive instruction in Orbiter approach and landing. This instruction is given in special Shuttle Training Aircraft, which are Gulfstream II business jets modified to perform like the Orbiter during landing. NASA has



four of these Shuttle Training Aircraft. Because the Orbiter approaches landings at such a steep angle (17 to 20 degrees) and high speed (over 300 miles per hour), the Shuttle Training Aircraft approaches with its engines in reverse thrust and with the main landing gear down. This approach helps to increase drag and duplicates the unique glide characteristics of the Orbiter. Assigned pilots receive about 100 hours of training in the Shuttle Training Aircraft prior to their flight. This is the equivalent of 600 shuttle approaches. In between these training sessions, the crew members continue to keep themselves up-to-date on the status of the space craft and payloads for their assigned mission.

# CIVIL AIR PATROL

## SQUADRON AEROSPACE EDUCATION ACTIVITY REPORT

- This form is to be completed by the Squadron Aerospace Education Officer and signed by the AEO and the squadron commander.
- Submit the report, with all documentation, to the Wing Director of Aerospace Education. The final report should be **POSTMARKED** not later than **15 DECEMBER**.
- **Complete all items. If there was no activity, report that information too.** Label any attached documentation to reference the "Activity Information Item" number.
- **ALL ACTIVITIES MUST HAVE TAKEN PLACE BETWEEN 1 JANUARY AND 31 DECEMBER OF THE CURRENT YEAR.**

SQUADRON NAME \_\_\_\_\_ CHARTER NUMBER \_\_\_\_\_ REPORT DATE \_\_\_\_\_

### SQUADRON AEROSPACE EDUCATION OFFICER INFORMATION

NAME \_\_\_\_\_ CAPSN \_\_\_\_\_ DATE ASSIGNED AS AEO \_\_\_\_\_

HOME ADDRESS \_\_\_\_\_

TELEPHONE - HOME \_\_\_\_\_ OFFICE \_\_\_\_\_ E-MAIL \_\_\_\_\_

YOUR 215 RATING \_\_\_\_\_ YEAGER AWARD -- YOURS [YES / NO] DATE \_\_\_\_\_ SQ COMMANDER [YES / NO] DATE \_\_\_\_\_

### SQUADRON AEROSPACE EDUCATION ACTIVITY INFORMATION

#### ACTIVITY INFORMATION ITEMS:

- Yeager:** Number of Yeager Awards earned this year \_\_\_\_\_. Total number of Yeager Awards held in unit \_\_\_\_\_.  
Total number of senior members currently assigned to the unit \_\_\_\_\_.  
Number of unit-conducted group study sessions this year for the Yeager award \_\_\_\_\_.  
Number of Yeager study kits (*Aerospace: The Challenge* and Instructor Guide) available in the squadron \_\_\_\_\_.
- 215 Specialty:** Number of members enrolled in the 215 Specialty Track \_\_\_\_\_.  
Number completed \_\_\_\_215T, \_\_\_\_215S, \_\_\_\_215M this year. Total 215 rated members in the unit \_\_\_\_.  
Who recruits/trains/instructs/mentors 215 candidates? [On a separate sheet attach 215 recruiters and trainers and members they recruited and/or trained this year]. Also, on a separate sheet list the names of individuals who have completed the 215T, 215S and 215M (215Ms should apply for the Crossfield).
- Aerospace Excellence Award Program:** Did you complete the program this year? [YES / NO]  
How many years has your unit participated in this program? \_\_\_\_\_.
- AE Counselors:** Number of AE counselors\* for cadets in the unit \_\_\_\_\_. Number of cadets in the unit \_\_\_\_\_.  
[\* "Counselor" is a squadron member who works with cadets doing the AE portions of the cadet achievement levels].
- CAP AE Events:** This year did you attend: [YES OR NO]: Wing Conference \_\_\_\_\_, AE seminar at Wing Conference \_\_\_\_\_, Region AE Conference \_\_\_\_\_, National Congress on Aviation and Space Education \_\_\_\_\_.  
[On a separate sheet attach documentation (event, site, and date) for each conference or seminar attended].
- Support to Schools:** How many AE programs did squadron members conduct in local schools this year \_\_\_\_?  
[Attach documentation (school, address, grade(s), type of AE program, contact person, squadron presenter(s), date)].
- Support to Outside Organizations and Groups:** How many AE programs did the squadron members do for outside organizations and groups this year \_\_\_\_? [Attach documentation: organization/group, address, contact person, type of AE program, squadron presenter(s), presentation site, and date].
- Squadron AE Activities:** How many AE activities did squadron do as a unit program \_\_\_\_?  
For all significant events such as guest speakers, field trips, model rocketry event, model airplane event, AE quiz bowl/trivia competition, Aerospace Education Excellence Award program activities, Aerospace Day, air show, fly-ins, etc. attach a listing of squadron aerospace activities (activity, presenter/group leader, and date).
- AE Current Events:** Does each squadron meeting include an aerospace current events discussion (YES / NO) \_\_\_\_?  
How many this year \_\_\_\_? Did the AE current events information come from: \_\_\_\_\_ newspapers, \_\_\_\_\_ magazines, \_\_\_\_\_ radio, \_\_\_\_\_ television, \_\_\_\_\_ Internet, \_\_\_\_\_ squadron AE bulletin board? [Mark top three sources with 1 = first, 2 = second, 3 = third, and x for the rest.]
- AE Staff Teamwork:** Did you, the AEO, consult with the Wing DAE during preparation of the squadron AE activity plan for the year (YES / NO) \_\_\_\_? Did the Wing DAE provide you (AEO) with a copy of the current wing plan of action (YES / NO) \_\_\_\_? How many "periodic update reports" did you (AEO) make to the WING DAE this year: \_\_\_\_\_ 5 or less, \_\_\_\_\_ 6-10, \_\_\_\_\_ over 10? Did Wing DAE conduct AEO training in the squadron this year (YES / NO) \_\_\_\_? Did you (AEO) submit nominations for: the Brewer (YES / NO), Crown Circle (YES / NO), Crossfield (YES / NO) awards?
- AE Support Resources:** Do you have a squadron AE bulletin board (YES / NO) \_\_\_\_? Do you have a squadron AE resource center (books, videos, study guides, pictures, articles, models, AE activity supplies) for members to borrow (YES / NO) \_\_\_\_? Do you have trained AE instructors for \_\_\_\_\_ cadets (YES / NO), \_\_\_\_\_ seniors (YES / NO), \_\_\_\_\_ school or organizational programs (YES / NO)?

SIGNATURE: AEROSPACE EDUCATION OFFICER \_\_\_\_\_ CAP GRADE \_\_\_\_\_

SIGNATURE: SQUADRON COMMANDER \_\_\_\_\_ DATE \_\_\_\_\_

## Wing Aerospace Education Activity Report

### What Is It?

A method of evaluating the aerospace education program in the field in order to ensure program quality and to determine aerospace education awards for the wing.

### Who Does It?

The Wing Director of Aerospace Education

### Why Do This?

This information is used by National Headquarters to determine Aerospace Education Mission Awards. This report also supports nominations for wing awards that may be given by your region; allows you to better determine the strong points and areas of concern in your own program; and provides necessary files for unit inspections.

### Materials Required

Report form; copies of records and data

### Procedure

Complete annual form; submit to National Headquarters / ETA; copies to RDAE; DCS/AE

### Step by Step Instructions:

☐ **Obtain report form.**

Forms are published in CAPP 15, *Aerospace Education Officers' Handbook*

☐ **Provide statistical information requested at top of form for your wing.**

☐ **Provide information regarding your wing aerospace education program.**

**From your files for the current reporting year ONLY, make and attach a copy of**

- \_\_\_ The signed wing Plan of Action
- \_\_\_ The report on the Plan of Action submitted to the wing commander
- \_\_\_ Aerospace Education Officer Roster for your wing [compile from \_\_\_ squadron reports]  
[A roster form is included in CAPP 15, *Aerospace Education Officers' Handbook*.]
- \_\_\_ Each 215 checklist (Technician, Senior, Master) showing rating completed
- \_\_\_ Copies of each wing aerospace education newsletter
- \_\_\_ Copies of each aerospace education article written for other publications
- \_\_\_ Copies of aerospace education activity reports submitted to the wing commander
  - \_\_\_ Copy of attendance roster and agenda for the Aerospace Education Seminar at the wing conference
  - \_\_\_ Copy of agenda with site and dates for region or wing Aerospace Education Conferences
- \_\_\_ Copies of reports from all subordinate unit visits
  - \_\_\_ Copy of attendance roster and agenda with site and date of any wing aerospace education workshop

☐ **Provide a brief report on aerospace education activities**

- \_\_\_ For an encampment: type of activities, length of time; location; dates
- \_\_\_ For Squadron Leadership Schools: type of activities, location; date
- \_\_\_ For aerospace education workshops in your wing: Did you help support them?  
How?

[Provide location, dates, and name of workshop coordinator for each workshop.]

- \_\_\_ For local schools: type of activities; personnel involved; school name(s); location(s).
- \_\_\_ For state agencies: type of activities; personnel involved; location(s) and date(s).
- \_\_\_ For other aerospace groups: type of activities; personnel involved; location(s); date(s).

☐ **Attach list of the names of nominees from your wing for this year's Crown Circle, Crossfield, and Brewer Awards.**

List all Wing nominees, not just the nomination packages you may have prepared.

☐ **Sign; obtain signature of wing commander.**

☐ **Submit to National Headquarters / ETA.**

Maintain a file copy of the complete report at the wing; provide a copy of report to RDAE.

Applications satellites provide services that can be or are used immediately by the people of Earth. These include communications, natural resources, navigation, environmental services, and search and rescue services.

*Echo, Telstar, Westar, Early Bird, and Syncom* are all examples of communications satellites.

The *Landsat* satellites are all natural resources satellites. *Polaris* and the *NAVSTAR Global Positioning System* are examples of navigation satellites.

Environmental satellites, such as *Tiros, Nimbus, and GOES*, are all weather satellites while *COSPAS / SARSAT* is an international search and rescue satellite system.



Satellite tracking stations relay data and communicate between spaceborne satellites and Earth. The



Tracking and Data Relay Satellite System is a system designed to provide simultaneous full-time coverage for the operational Space Shuttle and up to 25 other NASA low-orbiting spacecraft.

The Deep Space Network provides continuous communications for planetary spacecraft as the Earth rotates.

# CIVIL AIR PATROL

## WING AEROSPACE EDUCATION ACTIVITY REPORT

- This form is to be filled out by the wing Director of Aerospace Education (DAE) and signed by the wing DAE and the wing commander.
- Submit the report to HQ CAP/ETA, with copies to the region DCS/AE and RDAE, **POSTMARKED** not later than **15 January**.
- **Complete all items.** Label documentation to correspond with the "Activity Information Item" number
- Attach AEO roster: with unit charter number, CAPSN, rank, name, address, telephone, E-mail, 215 rating held, Yeager completed (yes / no)
- **NOTES:** -- NO POINTS AWARDED WITHOUT DOCUMENTATION. ALL ACTIVITIES MUST HAVE OCCURRED DURING CURRENT REPORTING YEAR.

WING NAME \_\_\_\_\_ CHARTER NUMBER \_\_\_\_\_ REPORTING YEAR \_\_\_\_\_

AS OF DECEMBER 31, NUMBER OF SENIOR SQUADRONS \_\_\_\_\_ CADET SQUADRONS \_\_\_\_\_ COMPOSITE SQUADRONS \_\_\_\_\_

NUMBER OF SENIOR MEMBERS \_\_\_\_\_ NUMBER OF CADETS \_\_\_\_\_

NUMBER OF UNITS PARTICIPATING IN AEROSPACE EDUCATION EXCELLENCE AWARD PROGRAM(in wing) \_\_\_\_\_

### WING AEROSPACE EDUCATION ACTIVITY INFORMATION

#### ACTIVITY INFORMATION ITEMS:

1. **Yeager:** Number of Yeager Awards earned this year in the entire wing. \_\_\_\_\_ (Document with CAPF 127s.)
2. **215 Specialty:** Number of new 215T \_\_\_\_\_, 215S \_\_\_\_\_, 215M \_\_\_\_\_ this year. (Document with attached copies of CAPP 215 "Commander's Evaluation And Rating Certification Checklist".) Total active 215T AEOs \_\_\_\_\_ 215S AEOs \_\_\_\_\_, 215M AEOs \_\_\_\_\_ in the entire wing. Were 215 training sessions for AEOs conducted by the wing DAE? (YES / NO) \_\_\_\_\_ (Document with dates, attendees, topics presented, duration).
3. **CAP AE Events:** Did the DAE attend the National Congress on Aviation and Space Education? (YES / NO) \_\_\_\_\_ Number of wing AEOs who attended or presented at the National Congress \_\_\_\_\_. Did the wing conduct an Aerospace Education Conference this year? (YES / NO) \_\_\_\_\_ [Document with dates, attendees, topics presented, duration]. Did the wing conduct an Aerospace Education Seminar at the wing conference? (YES / NO) \_\_\_\_\_ [Document with dates, attendees, topics presented, duration]. Did the wing conduct an Aerospace Education Workshop? (YES / NO) \_\_\_\_\_ [Document with dates, attendees, topics presented, duration.] Did the wing support college or university AE workshops? (YES / NO) \_\_\_\_\_ [Document with workshop name, dates, support provided].
4. **SUPPORT TO SCHOOLS:** How many AE programs did all wing units present in state schools? \_\_\_\_\_ [Document from squadron Aerospace Education Activity Reports and group or wing activity records.]
5. **Support to Outside Organizations and Groups:** How many AE programs did all wing units do with outside organizations and groups? \_\_\_\_\_ [Document from squadron Aerospace Education Activity Reports and group or wing activity records. Include joint programs with state or federal education, space, or aviation agencies.]
6. **Wing Staff AE Activities:** How many units were visited by the wing AE staff during year? \_\_\_\_\_ [Attach listing of unit visited, dates, persons contacted, topics discussed, training given]. Was there a wing cadet encampment? (YES / NO) \_\_\_\_\_. Was the required AE program presented at the wing encampment? (YES / NO) \_\_\_\_\_. [Attach listing of dates, attendees, topics presented, duration]. How many Squadron Leadership Schools \_\_\_\_\_ and Corporate Learning Courses \_\_\_\_\_ were conducted in the wing last year? \_\_\_\_\_. [Attach list of SLS and CLC dates, attendees, AE topics presented, duration of presentations.] Was a wing AE newsletter published and distributed? (YES / NO) \_\_\_\_\_. [Attach copies of each newsletter for the year.] Did the wing submit and publish AE articles? (YES / NO) \_\_\_\_\_. [Attach copies of media published AE articles.] How many AE activities did the wing staff do as their unit program? \_\_\_\_\_. For all significant events such as guest speakers, field trips, model rocketry event, model airplane event, AE quiz bowl/trivia competition, Aerospace Education Excellence Award program activities etc, attach a listing of wing staff aerospace activities (activity, presenter/group leader, and date).
7. **AE Current Events:** Does the wing staff meeting include AE current events discussion? (YES / NO) \_\_\_\_\_. How many AE current event discussions this year? \_\_\_\_\_ [Attach list of dates and principal event/topic discussed].
8. **AE Staff Teamwork:** Does the wing have an AE Plan of Action? (YES / NO) \_\_\_\_\_ [Attach plan]. Did the wing DAE provide an AE Plan of Action end-of-year report to the wing commander? (YES / NO) \_\_\_\_\_ [Attach report]. Does the wing DAE provide periodic AE updates to the wing commander? (YES / NO) \_\_\_\_\_? How many were done this year? \_\_\_\_\_. How many "Aerospace Education Activity Report – Squadron" did the wing DAE receive at the end of the year? \_\_\_\_\_. Was the wing AEO roster current at the end of the year? (YES / NO) \_\_\_\_\_ [Attach copy of most current AEO roster with all positions listed –filled and unfilled]. Did the wing or any subordinate unit submit Brewer Award nominations (YES / NO) \_\_\_\_\_ [number \_\_\_\_\_], Crossfield AE Teacher of Year Award nominations (YES / NO) \_\_\_\_\_ [number \_\_\_\_\_], Crown Circle Award nominations (YES / NO) \_\_\_\_\_ [number \_\_\_\_\_]?
9. **AE Support Resources:** Does wing have an AE bulletin board? (YES / NO) \_\_\_\_\_. Does the wing have an AE resource center (books, videos, study guides, models, AE activity supplies) for members? (Y/N) \_\_\_\_ [Attach resource listing]. Does the wing have trained AE instructors (YES / NO) for: \_\_\_\_- cadets, \_\_\_\_ seniors, \_\_\_\_ school/organization programs? [Attach instructor listing].

SIGNATURES: WING DAE \_\_\_\_\_ WING COMMANDER \_\_\_\_\_ DATE \_\_\_\_\_

# WING AEROSPACE EDUCATION ACTIVITY REPORT ATTACHMENT CHECKLIST

[illegible]

NOTES:

1. To complete this report, wing aerospace education officers must keep organized records and squadron aerospace education officers must provide their reports to the wing in a timely manner.
2. Where an annual Squadron Aerospace Education Activity Report is attached to verify wing AE activities and programs, highlight or mark report area or areas which apply to Wing Aerospace Education Activity Report.
3. Where a listing is requested, attach the list mentioned on the previous page.

# AEROSPACE EDUCATION ACTIVITY REPORT -- SCORE SHEET

## ACTIVITIES MUST BE FOR THE CURRENT CALENDAR YEAR ONLY

PLAN OF ACTION		BEST		FAIR		MARGINAL	
Goals (to be rated by HQ CAP/ETA):	Finite/achievable	25	Addresses all areas	10	10	15	Marginal implementation
Final report on Plan:	Plan implemented	25	Partial implementation	10	10	15	Marginal implementation
STAFFING -- APPLIES TO WING DIRECTOR OF AEROSPACE EDUCATION / INTERNAL AEO / EXTERNAL AEO							
Wing HQ Aerospace Education staff	All three positions filled	10	Two positions filled	05	One position filled	05	One position filled
Subordinate Unit Aerospace Ed Officers	All positions filled in units / groups	10	90% of positions filled	05	75% of positions filled	05	75% of positions filled
Vacant Aerospace Ed Officer positions	Plan to fill / plan carried out	05					
LEVEL II --- 215 SPECIALTY TRACK TRAINING							
Wing HQ AE staff -- 215 ratings	Each master rating	05	Each senior rating	03	Each technician rating	01	01
Level II--215 Training [This Year ONLY]	215 M: Each completed	05	215 S: Each completed	03	215 T: Each completed	01	01
INTERNAL AE PROGRAM							
AEPSM	Each wing AE staff member	02	Wing Commander	02	AEPSM Testing in Wing	10	10
EXCELLENCE AWARDS PROGRAM	Units participating [each]	02	Bonus: Units Completing [each]	10			
	Three or more years [each unit]	05	Second year [each unit]	03			
Wing Headquarters: AE Bulletin Board	Displayed and maintained	02					
Wing Aerospace Education Newsletter	Each issue published [submit copy]	03					
AE article published in other publication	Each article published[submit copy]	02					
Monthly written activity reports to Wing CC	Copy of each submitted	03					
National Congress	All wing AE staff in attendance	10	Two wing AE staff in attendance	05	One wing AE staff in attendance	01	01
Region/Wing AE Conference/Symposium	All wing AE staff in attendance	10	Two wing AE staff in attendance	05	One wing AE staff in attendance	01	01
AE Seminar(s) in held in wing	For cadet or senior members	10					
Wing Internal AE workshop(s)/conference(s)	Planned and held	10					
Unit visitation [maximum points: 08]	Each unit visited	02					
Aerospace Education at encampment	Include agenda / date / site	05					
Aerospace Education at SLS	Include agenda / date / site	05					
EXTERNAL AE PROGRAM							
Aerospace Education Workshop	Sponsored or supported [each]	20	Include type of support given				
Local schools	Teacher in-service(s) / training held	15	Work in the classroom	15	Brief school board	15	15
State agencies	Briefing / other support	05	Include type of support given				
Other Aerospace Education groups	Joint activity / other support	05	Include type of support given				
AWARDS							
Crown Circle	Nomination(s) Submitted	15					
Crossfield	Nomination(s) Submitted	15					
Brewer	Nomination: each category	03	Bonus: Nominate - all categories	10			

For documentation, attach copies of: roster, 215 records of completion, AE newsletters and articles; unit visitation reports, monthly activity reports, Plan of Action, December report on Plan of Action, Sign-in sheets / agenda / date and location information for AE Seminars, Wing Conference, Wing Conference, Squadron Leadership School, Corporate Learning Course, encampment, external aerospace workshops, in-service programs; other copies of reports as needed to verify activity completion.

## Region Aerospace Education Activity Report

### What Is It?

A method of recording and reporting aerospace education programs accomplished within the region during the year to the region commander and CAP National Headquarters.

### Who Does It?

The Region Deputy Chief of Staff for Aerospace Education (DCS/AE).

### Why Do This?

Gathering, organizing, and analyzing this information allows the region DCS/AE to

- 1) assess the effectiveness of the region and subordinate unit aerospace education programs,
- 2) develop an aerospace education plan of action for the coming year, and
- 3) report to the region commander and the Region Director of Aerospace Education on the region's aerospace education performance for the year.

### Materials Required

Region Aerospace Education Activity Report form (found in CAPP 15).

Copies of region records and data and subordinate unit AE activity reports.

### Procedure

Complete Region Aerospace Education Activity Report form.

Submit to Region Commander; send copy to RDAE, and send copy to HQ CAP/ETA.

### Step by Step Instructions:

☐ **Obtain report form**

\_\_\_\_ The form is published in CAPP 15, *Aerospace Education Officers' Handbook*.

☐ **Provide statistical information and data necessary to complete the report**

\_\_\_\_ Roster of region AE staff and wing DAEs (current for end of the reporting year).

☐ **Gather information regarding your region aerospace education program.**  
**From your files for the current reporting year ONLY, make and attach a copy of**

\_\_\_\_ AEPSM / Yeagers completed by region staff; throughout the region

[compile from wing reports; region records]

\_\_\_\_ 215 Specialty Track training completed by region staff; throughout the region

[compile from wing reports; region records]

\_\_\_\_ Plan of Action for the region

\_\_\_\_ itemize results of activities completed or in progress

\_\_\_\_ AE orientation training for new wing DAEs and region staff AEOs

\_\_\_\_ Date(s) conducted; person(s) trained; trainer; topics covered in each session

\_\_\_\_ AE staff coordination with DAEs

\_\_\_\_ Date(s); topics; attendance / persons(s) who received guidance

\_\_\_\_ AE coordination with RDAE

\_\_\_\_ Date(s); topics; results of coordination

\_\_\_\_ Brewer Awards Committee – [Yes / No]; number of nominations per category

\_\_\_\_ List winner(s) selected and forwarded for national competition

\_\_\_\_ Region Conference General Assembly Aerospace Education presentation  
[Yes / No]

\_\_\_\_ Date; site; topic(s); presenter(s)



- \_\_\_\_ Aerospace Education seminar conducted at region conference – [Yes / No]
- \_\_\_\_ Date; site; agenda; instructor; attendance roster
- \_\_\_\_ Region Aerospace Education conference conducted – [Yes / No]
- \_\_\_\_ Dates; site; agenda; presenters; attendance roster
- \_\_\_\_ Aerospace Education presentation at Region Staff College – [Yes / No]
- \_\_\_\_ Date; site; topics; presentation duration; instructor(s); attendance roster
- \_\_\_\_ AE presentation(s) by region staff at cadet encampment – [Yes / No]
- \_\_\_\_ Date; site; topics; duration; instructor; attendance roster
- \_\_\_\_ Aerospace Education assistance to region cadet competition team – [Yes / No]
- \_\_\_\_ Dates; type of assistance
- \_\_\_\_ College / University AE workshop visits and presentations – [Yes / No]
- \_\_\_\_ School name(s); dates; contact person; results
- \_\_\_\_ National Congress on Aviation and Space Education
- \_\_\_\_ Roster of region AE staff attending
- \_\_\_\_ AE coordination with “outside CAP” groups to promote AE – [Yes / No]
- \_\_\_\_ Dates; contact persons; results
- \_\_\_\_ Unit AE activities and events conducted by region staff – [Yes / No]
- \_\_\_\_ Attach listing of region staff aerospace activities [activity, presenter / group leader, date] for all significant events such as guest speakers, field trips, model rocketry event, model airplane event, AE quiz bowl / trivia competition, Aerospace Education Excellence Award program activities, Aerospace Day, air show, fly-ins, etc.
- \_\_\_\_ Aerospace Education Newsletter from Region – [Yes / No]
- \_\_\_\_ Frequency; distribution list

Note: Having a notebook or a set of files covering each of these areas, plus keeping notes and records as events happen, will make the end-of-year report easier to complete.

- ☐ **Fill in Region, charter number, the period the report covers, number of wings in region, number of cadets, seniors, AEMs in region.**
- ☐ **Fill in information for Region DCS/AE and prepare staff roster of Internal AEO, External AEO, and Wing DAEs (charter number, CAPSN, rank, name, home address, telephone number(s), E-mail, and, if appropriate, your 215 rating, and if those listed have earned the Yeager award).**
- ☐ **Report on required items; respond to questions and provide documentation**  
(if required).
  - \_\_\_\_ Yeager Award
  - \_\_\_\_ 215 Specialty Track
  - \_\_\_\_ AE Plan of Action
  - \_\_\_\_ AE Staff Teamwork
  - \_\_\_\_ CAP AE Events
  - \_\_\_\_ Support To Outside Organizations and Groups
  - \_\_\_\_ AE Activities
  - \_\_\_\_ AE Support Resources
- ☐ **Sign; obtain signature of Region Commander**  
Provide a copy of the report to Region commander, RDAE, and NHQ CAP/ETA.

**CIVIL AIR PATROL**  
**REGION AEROSPACE EDUCATION ACTIVITY REPORT**

- This form is to be filled out by the region Deputy Chief of Staff / Aerospace Education (DCS/AE) and signed by the DCS / AE and the region commander/. All reported activities must have been completed during the report year.
- Submit the report with all documentation to HQ CAP/ETA, with copy to RDAE, **POSTMARKED** not later than **31 January**.
- **Complete all items.** Label documentation to correspond with the "Activity Information Item" number
- Attach AEO roster: with unit charter number, CAPSN, rank, name, address, telephone, E-mail, 215 rating held, Yeager completed (yes / no)

REGION NAME \_\_\_\_\_ CHARTER NUMBER \_\_\_\_\_ REPORTING YEAR \_\_\_\_\_

AS OF DECEMBER 31, NUMBER OF: WINGS \_\_\_\_\_ SENIOR MEMBERS \_\_\_\_\_ CADETS \_\_\_\_\_

**\* REGION AEROSPACE EDUCATION OFFICER INFORMATION \***

NAME \_\_\_\_\_ CAPSN \_\_\_\_\_ DATE ASSIGNED AS DCS/AE \_\_\_\_\_

HOME ADDRESS \_\_\_\_\_

TELEPHONE - HOME \_\_\_\_\_ OFFICE \_\_\_\_\_ E-MAIL \_\_\_\_\_

YOUR 215 RATING \_\_\_\_\_ YEAGER AWARD -- YOURS [YES / NO] DATE \_\_\_\_\_ REGION COMMANDER [YES / NO] DATE \_\_\_\_\_

\* Attach region staff AEO roster to include wing DAEs. Report following information: charter number where member assigned, CAPSN, rank, name, address, telephone, email, 215 rating held (technician, senior, master), Yeager completed (yes/no)

**REGION AEROSPACE EDUCATION ACTIVITY INFORMATION**

**ACTIVITY INFORMATION ITEMS:**

1. **Yeager:** Number Yeager Awards earned this year by region staff \_\_\_\_\_. Total number of Yeager Awards held by region staff \_\_\_\_\_. Total number Yeager Awards earned in region this year \_\_\_\_\_. [Data available in wing reports.]
2. **215 Specialty Track:** Number of region staff members enrolled in 215 Specialty Track \_\_\_\_; Number completed \_\_\_\_ 215T, \_\_\_\_ 215S, \_\_\_\_ 215M this year. Total 215-rated region staff members \_\_\_\_\_. Number of 215 ratings completed in region this year \_\_\_\_\_. [Data available in wing reports.]
3. **AE Plan of Action:** Was one prepared and signed by region commander? (YES / NO) \_\_\_\_, What percentage of plan was successfully achieved? \_\_\_\_, How many wings in region submitted AE Plan of Action? \_\_\_\_\_. [Attach region plan of action with achievement results as of close of report year.]
4. **AE Staff Teamwork:** Did you train new wing DAEs and region staff AEOs? (YES / NO) \_\_\_\_\_. [Attach listing with dates, persons trained, trainer(s), materials and topics covered.] Did you consult and coordinate with wing DAEs during year? (YES / NO) \_\_\_\_\_. [Attach list with dates, major topics, persons receiving guidance.] Did you consult with RDAE on AE programs for year? (YES / NO) \_\_\_\_\_. [Attach list with dates, topics, results.] Did you conduct region Brewer Awards board and submit region award winners to National Headquarters? (YES / NO) \_\_\_\_, How many region Brewer winners were national winners this year? \_\_\_\_\_.
5. **CAP AE Events:** Was general assembly AE presentation made at region conference? (YES / NO) \_\_\_\_, Was AE seminar conducted at region conference? (YES / NO) \_\_\_\_, Was region AE Conference conducted? (YES / NO) \_\_\_\_, Was AE presentation made at Region Staff College? (YES / NO) \_\_\_\_\_. Did region AE staff make AE presentation at cadet encampments? (YES / NO) \_\_\_\_, Did region AE staff provide AE assistance to region cadet competition team? (YES / NO) \_\_\_\_, Did region AE staff visit or present at College / University workshops in region? (YES / NO) \_\_\_\_, Did members of region staff attend National Congress on Aviation and Space Education (YES / NO) \_\_\_\_\_. [Attach a separate sheet with documentation (event, site, date, region AE staff attendees, and, where presentations were made, include topics presented, presentation duration, number of attendees.)
6. **Support to Outside Organizations and Groups:** Did you coordinate with "outside CAP" groups to promote AE? (YES / NO) \_\_\_\_\_. [Attach on separate sheet list of dates, contacts, proposals, results.]
7. **AE Activities:** How many AE activities did region staff do as a unit program? \_\_\_\_\_. [Attach listing of region staff aerospace activities (activity, presenter/group leader, and date) for all significant events like guest speakers, field trips, model rocketry event, model airplane event, AE quiz bowl/trivia competition, Aerospace Education Excellence Award program, Aerospace Day, air show, fly-ins, other.]
8. **AE Support Resources:** Do you have a region headquarters AE bulletin board? (YES / NO) \_\_\_\_, Do you have a region headquarters AE resource center (books, videos, study guides, pictures, articles, models, AE activity supplies) for members to borrow? (YES / NO) \_\_\_\_, Do you produce and distribute a region AE newsletter? (YES / NO) \_\_\_\_\_. [Attach distribution list and sample.]

SIGNATURE: REGION DCS/AE \_\_\_\_\_ CAP GRADE \_\_\_\_\_

SIGNATURE: REGION COMMANDER \_\_\_\_\_ DATE \_\_\_\_\_

# **CIVIL AIR PATROL**

## **REGION DIRECTORS OF AEROSPACE EDUCATION**

### **GREAT LAKES REGION**

5440 Skeel Ave, Suite 2 / Building 110, Area C  
Wright Patterson Air Force Base  
Ohio 45433-5239  
937 – 257 - 6836 FAX -- 937 – 257 - 8260

### **MIDDLE EAST REGION**

1609 Brookley Avenue  
Andrews Air Force Base  
Maryland 20762-5000  
240 - 857 - 0166 FAX -- 240 – 857 - 5273

### **NORTH CENTRAL REGION**

760 Military Highway / Building 852  
Minneapolis  
Minnesota 55450-2100  
612 - 713 - 1471 FAX -- 612 – 713 - 1468

### **NORTHEAST REGION**

2610 East Second Street  
McGuire Air Force Base  
New Jersey 08641-5018  
609 - 724 - 2967 FAX -- 609 – 724 - 5675

### **PACIFIC REGION**

5934 Price Avenue / Building 1019  
McClellan Air Force Base  
California 95652-1257  
916 – 920 – 2099 FAX -- 916 - 920 - 2097

### **ROCKY MOUNTAIN REGION**

6334 South Jay Way  
Littleton  
Colorado 80123-3849  
303 - 795 – 3656 FAX -- 303 – 795 - 9773

### **SOUTHEAST REGION**

105 South Hansell Street / Building 714  
Maxwell Air Force Base  
Alabama 36112-6332  
334 - 953 - 4213 FAX -- 334 – 953 - 7771

### **SOUTHWEST REGION**

CAP Southwest Liaison Region / CAP-USAF  
1504 Desert Storm  
Naval Air Station Joint Reserve Base  
Fort Worth, Texas 76127-1504  
817 – 782 - 6400 Extension 16  
FAX -- 817 – 782 – 6405

## **CIVIL AIR PATROL NATIONAL HEADQUARTERS**

### **AEROSPACE EDUCATION DIVISION**

105 South Hansell Street, Building 714  
Maxwell Air Force Base  
Alabama 36112-6332  
334 - 953 – 5095 FAX -- 334 – 953 - 4235

### **SENIOR TRAINING DIVISION**

105 South Hansell Street, Building 714  
Maxwell Air Force Base  
Alabama 36112-6332  
334 - 953 - 5798 FAX -- 334 – 953 – 7771

### **CIVIL AIR PATROL BOOKSTORE**

30 South Arnold Street, Building 848  
Maxwell Air Force Base  
Alabama 36112-6332  
800 - 633 - 8768 FAX -- 334 - 265-6381

### **CIVIL AIR PATROL SUPPLY DEPOT**

14400 Airport Boulevard  
Amarillo  
Texas 79111-1207  
800 - 858 - 4370 FAX -- 806 – 335 - 2416

### **CADET PROGRAMS DIVISION**

105 South Hansell Street, Building 714  
Maxwell Air Force Base  
Alabama 36112-6332  
334 - 953 – 5309 FAX -- 334 – 953 - 6699

### **MEMBERSHIP / PERSONNEL DIVISION**

105 South Hansell Street, Building 714  
Maxwell Air Force Base  
Alabama 36112-6332  
334 - 953 – 7748 FAX -- 334 – 953 - 4262

## EDUCATIONAL GROUPS

### NATIONAL AIR AND SPACE MUSEUM

Smithsonian Institution  
National Air and Space Museum  
Education Division, MRC 305  
Washington, DC 20560  
202 – 786 - 2109

### CHALLENGER CENTER FOR SPACE SCIENCE EDUCATION

1055 North Fairfax Street / Suite 100  
Alexandria, Virginia 22314  
703 - 683 - 9740

### ASTRONAUT MEMORIAL FOUNDATION, INCORPORATED

Mail Code AMF  
NASA Kennedy Space Center  
Kennedy Space Center, Florida 32899  
407 – 268 - 0272

### U. S. SPACE FOUNDATION

2860 South Circle Drive Suite 2301  
Colorado Springs, Colorado 80906-4184  
719 – 576 - 8000

### YOUNG ASTRONAUTS

Young Astronaut Council  
Post Office Box 65432  
1308 - 19th Street, Northwest  
Washington, DC 20036-1602  
202 - 682 - 1985

### U. S. SPACE CAMP, SPACE ACADEMY, and AVIATION CHALLENGE

U.S. Space and Rocket Center  
One Tranquility Base  
Huntsville, Alabama 35807  
800 – 63 - SPACE OR  
205 – 837 - 3400

## NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

### NASA CENTRAL OPERATION OF RESOURCES FOR EDUCATORS (CORE)

Educational Coordinator -- NASA CORE  
Lorain County Joint Vocational School  
15181 Route 58 South, Oberlin, Ohio 44074  
216 - 774 - 1051, Extension 293 or 294 FAX: 216 - 774 - 2144

### NASA SPACELINK

Available worldwide at:

<http://www.spacelink.msfc.nasa.gov>

Spacelink computer access number (modem line) is 205 – 895 – 0 028

For further information, contact:

Spacelink Administrator, Education Programs Office, Mail Code CL01  
NASA Marshall Space Flight Center / Huntsville, Alabama 35812-0001  
256 - 544 - 0038

E-mail: [comments@spacelink.msfc.nasa.gov](mailto:comments@spacelink.msfc.nasa.gov)

### NASA TELEVISION

NASA's distribution system for  
live Space Shuttle mission coverage, press briefings, educational programming  
Available on Cable Television or with Satellite Antenna  
Transmitted by satellite on GE-2, Transponder 9C at 85 degrees West longitude, vertical polarization,  
frequency -- 3880 MHz, audio -- 6.8 MHz

For more information, contact

NASA TV

NASA Headquarters / Technology and Evaluation Branch / Code FET  
Washington, DC 20546-0001

For other services, contact the **NASA Teacher Resource Center** that serves your state or area:

**Alaska / Arizona / California / Hawaii  
Idaho/Minnesota / Nevada / Oregon / Utah  
Washington / Wyoming**  
NASA Ames Research Center  
Teacher Resource Center  
Mail Stop TO-25  
Moffett Field, California 94035-1000  
415 - 604 - 3575

**California**  
**Cities near Dryden Facility**  
NASA Dryden Flight Research Facility  
Teacher Resource Center  
Public Affairs Office (Trl. 42)  
Edwards, California 93523-0273  
805 - 258 - 3456

**Jet Propulsion Laboratory**  
[Space Science, Planetary Exploration]  
JPL NASA Teacher Resource Center  
ATTN: JPL Educational Outreach  
4800 Oak Grove Drive  
Mail Stop CS-530  
Pasadena, California 91109-8099  
818 - 354 - 6916

**Connecticut / Delaware / Maine / Maryland  
Massachusetts / New Hampshire / New Jersey  
New York / Pennsylvania / Rhode Island  
Vermont / Washington DC**  
NASA Goddard Space Flight Center  
Teacher Resource Laboratory  
Mail Code 130.3  
Greenbelt, Maryland 20771-1000  
301 - 286 - 8570

**Virginia / Maryland's Eastern Shore**  
NASA Wallops Flight Facility  
Education Complex - Visitor Center  
Teacher Resource Laboratory  
Building J-17  
Wallops Island, Virginia 23337-5099  
804 - 824 - 2297 or 804 - 824 - 2298



**Kentucky / North Carolina / South Carolina  
Virginia / West Virginia**  
NASA Langley Research Center  
Teacher Resource Center  
Virginia Air and Space Center  
600 Settlers Landing Road  
Hampton, Virginia 23669-4033  
804 - 727 - 0900, Extension 757 (touch tone)

**Colorado / Kansas / North Dakota / Nebraska New  
Mexico / Oklahoma / South Dakota / Texas**  
NASA Johnson Space Center  
Teacher Resource Room / Mail Code AP-4  
Houston, Texas 77058-3696  
713 - 483 - 8696

**Florida / Georgia / Puerto Rico / Virgin Islands**  
NASA Kennedy Space Flight Center  
Educators Resource Laboratory/Mail Code ERL  
Kennedy Space Center, Florida 32899-0001  
407 - 867 - 4090

**Illinois / Indiana / Michigan / Minnesota  
Ohio / Wisconsin**  
NASA Glenn Research Center at Lewis Field  
Teacher Resource Center  
21000 Brookpark Road / Mail Stop 8-1  
Cleveland, Ohio 44135-3191  
216 - 433 - 2017

**Alabama / Arkansas / Iowa / Louisiana  
Missouri / Tennessee**  
NASA Marshall Space Flight Center  
Teacher Resource Center  
U.S. Space and Rocket Center  
One Tranquility Base / Post Office Box 070015  
Huntsville, Alabama 35807-7015  
256 - 544 - 5812

**Mississippi**  
NASA Stennis Space Center  
Teacher Resource Center / Building 1200  
Stennis Space Center, Mississippi 39529-6000  
601 - 688 - 3338



**FEDERAL AVIATION  
ADMINISTRATION**  
Department of Transportation  
NASSIF Building  
Room PL-100 / 400 - 7th Street, SW  
Washington, DC 20950

# RESOURCES TO EXPLORE . . . .

## PACIFIC REGION AEROSPACE EDUCATION WEB SITE

<http://www.catalyst.net/DAE/>

features aerospace education events and resources for Civil Air Patrol members and Pacific Region classroom teachers.

What you will find at this web site:

### **FLIGHT OF DISCOVERY STUDENT STUDY GUIDE**

Barbara Roof's excellent guide to each chapter of the cadet text *Aerospace: The Flight of Discovery*.

### **SATELLITES IN SPACE: MANKIND'S OUTWARD REACH -- TUTORIAL**

### **BECOMING AN AEROSPACE EDUCATION MEMBER**

### **AEROSPACE MUSEUM LINKS**

Take a virtual walk through the **best aerospace museums in the west**. A great way to prepare for a visit.

### **BEST AVIATION BOOKS**

The best of the best ever written about the "wild blue". List of suggested readings is the webmaster's selection of books to build a personal understanding and appreciation of aviation history

### **CLASSROOM TEACHING AIDS**

Resources offered to teachers by the Civil Air Patrol.

### **SPACE AND AIR WEB SITES**

## GREAT LAKES REGION AEROSPACE EDUCATION WEB SITE

<http://www.asc.wpafb.af.mil/cap/glr-ae/ae.htm>

Extensive web site featuring aerospace education events and resources for all Civil Air Patrol members and for classroom teachers. Includes information for Great Lakes region classroom teachers on conferences.

What you will find at this web site:

### **CONFERENCE INFORMATION**

### **LESSON PLANS**

Each quarter, a new lesson plan is presented. Also: archives of lesson plans from 1996, 1997, and 1998.

### **CIVIL AIR PATROL FORMS**

Forms for Civil Air Patrol aerospace education program reports, aerospace education awards and grants.

### **AEROSPACE EDUCATION PROGRAM INFORMATION**

Information on Civil Air Patrol internal, external aerospace education programs. Includes tutorials, guides.

### **AEROSPACE EDUCATION RESOURCES**

Source lists are offered for your convenience.

### **AEROSPACE EDUCATION LINKS**

Links to a variety of topics, including aerospace history, NASA program and education sites, lesson plans,; FAA; the Minnesota Department of Transportation; United States Space Foundation, and ERIC. Also: simulations, games, photography.

**The Internet** provides a wide variety of support systems, including background information, student activities, interactive programs, educational resources, research assistance, and program support. A sampling of these sites includes:

<http://bbs.augsburg.edu/mdot/mdot.html>

Minnesota Department of Transportation home page; links to aviation pages

<http://ericir.syr.edu/edu.html>

Educational Resources Information Center; links to AskERIC, Discovery School Channel

<http://ericir.syr.edu/Projects/Newton.html>

Web Site for Newton's Apple, includes lesson plans and activities

<http://fits.cv.nrao.edu/www/astrometry.html>

Astro Web

<http://fornax.arc.nasa.gov:9999/badweb/badweb.html>

NASA Ames Research Center's Basic Aircraft Design web

<http://heasarc.gsfc.nasa.gov/docs/StarChild/StarChild.html>

Hubble Space Telescope photographs; Space environment graphics and data

<http://iita.ivv.nasa.gov/products/>

NASA education resources / programs

<http://info.itp.berkeley.edu/Vol1/Contents.html>

Interactive Physics

<http://kyrene.kiz.az.us/itech/kmsitech/rocket/tim.htm>

Bottle rocket building technology; possible alternatives to standard designs

<http://lcweb.loc.gov/homepage/lchp.html>

Library of Congress

<http://life.anu.edu.au/education/library.html>

Education Library

<http://marvel.stsci.edu/net-resources.html>

Astro Web

<http://maxwell.sfsu.edu/asp/amateur.html>

List of local astronomy clubs

<http://nssdc.gsfc.nasa.gov/planetary/states03.html>

NASA Teacher Resource Centers listing

<http://nyelabs.kcts.org>

The Internet home of Bill Nye, the Science Guy

<http://quest.arc.nasa.gov>

NASA's K-12 Internet Initiative

<http://quest.arc.nasa.gov/livefrom/Stratosphere.html>

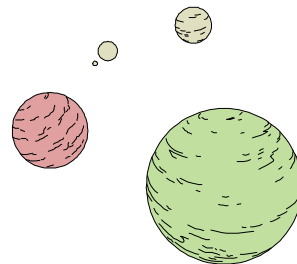
Live from the Stratosphere program

<http://quest.acr.nasa.gov/shuttle/techer/rockets/matrix.html>

Rocket activities matrix

<http://rs560.cl.msu.edu/weather/interactive.html>

Weather



<http://scholastic.com>

Scholastic Place, Scholastic Education's home page; links to student sites, series tie-ins

<http://seawifs.gsfc.nasa.gov/JASON/JASON/html>

JASON electronic field trips

<http://seds.lpl.arizona.edu/messier/Messier.html>

University of Arizona Lunar and Planetary Laboratory; images of Messier deep-sky objects

<http://seds.lpl.arizona.edu/nineplanets/nineplanets/nineplanets.html>

University of Arizona Lunar and Planetary Laboratory; multimedia Tour of the Solar System

<http://shuttle.nasa.gov/>

NASA Shuttle Web Archives

<http://skyview.gsfc.nasa.gov/skyview.html>

Skyview maps at different wavelengths

<http://spacelink.msfc.nasa.gov>

NASA's Spacelink for news and images

<http://sunsite.unc.edu/lunar>

Lunar Institute of Technology

<http://sunsite.unc.edu/lunar/alien.html>

SETI game

<http://www.ag.ohio-state.edu/~rockets/order.html>

Ohio State Extension's 4-H "Rockets Away!" curriculum; design, launch a bottle rocket

<http://www.cea.berkeley.edu/Education/SII/pilot.html>

Science On-Line; Virtual museums

<http://www.c3.lanl.gov/~cjhamil/Browse/mars.html>

Interactive Mars map

<http://www.c3.lanl.gov/~cjhamil/SolarSystem/>

Views of the solar system

<http://www.earth.ast.smith.edu/ED.ed.html>

American Astronomical Society's education initiative

<http://www.cap.af.mil>

Civil Air Patrol home page; links to other aerospace education sites

<http://www.eia.brad.ac.uk/rti/automated.html>

Robotic telescopes

<http://www.eia.brad.ac.uk/btl>

Multimedia guide to stars and galaxies

<http://www.einet.net/galaxy.html>

World Wide Web sources for science and math

<http://www.eng.fiu.edu/aero/history.htm>

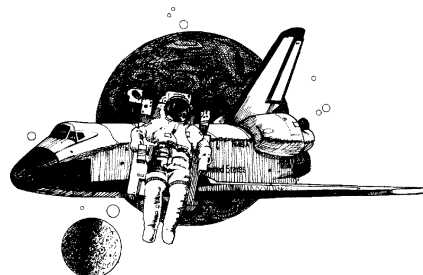
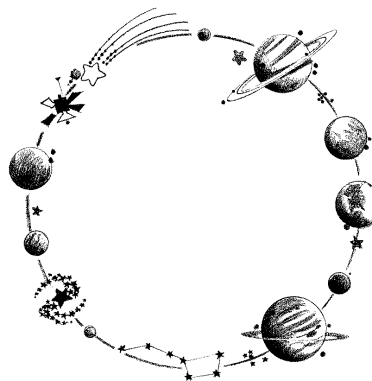
Aviation and aerospace lesson plans and information

<http://www.exploratorium.edu>

San Francisco's Exploratorium

<http://www.fourmilab.ch/earthview/vplanet.html>

Earth viewed as a planet





<http://www.fourmilab.ch/solar/solar.html>

View the solar system; download astronomical-related public domain software

<http://www.gettysburg.edu/project/physics/clea/CLEAhome.html>

Lab exercises in astronomy

<http://www.gsfc.nasa.gov/NASAhomepage.html>

NASA home page

<http://www.halcyon.com/cairns/physics/html>

Educational resources

<http://www.hpcc.astro.washington.edu/k12/ask.html>

Answers to astronomical questions

<http://www.hpcc.astro.washington.edu/k12/astroimage.html>

Astronomical Images

<http://www.hpcc.astro.washington.edu/k12/astroindex.html>

Educational resources

<http://www.hpcc.astro.washington.edu/k12/planetaria.html>

Planetariums

<http://www.hpccl.hpcc.noaa.gov/nws/nwshome.html>

National Weather Service

<http://www.intellicast.com>

MSNBC Weather site

<http://www.jpl.nasa.gov>

Jet Propulsion Laboratory home page

<http://www.jpl.nasa.gov/educ/education.html>

Jet Propulsion Laboratory Educational Outreach

<http://www.jpl.nasa.gov/galileo/>

Project Galileo Home Page

<http://www.ksc.nasa.gov/history/history.html>

History of spaceflight

<http://www.lbl.gov/Education/HOU.html>

Leuschner Observatory real-time images

<http://www.maxwell.sfsu.edu/asp/tnl/tnl.html>

Back issues of teacher's newsletter, *Universe in the Classroom*

<http://www.nasa.gov/>

Gallery for downloading; NASA Centers information

<http://www.nas.nasa.gov/NAS/SpaceSettlement/Contest/contests.html>

Space Settlement design contests

<http://www.nasm.edu/NASMAP.html>

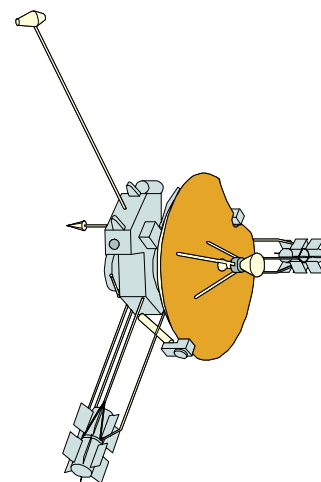
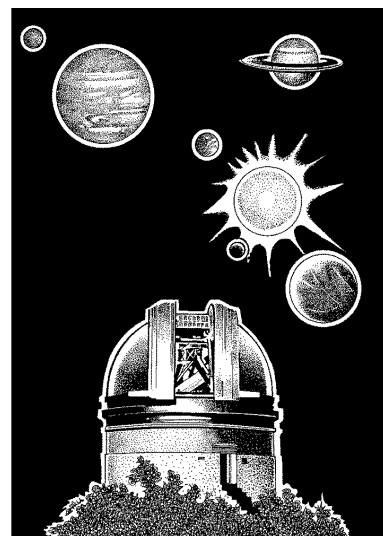
National Air and Space Museum

<http://www.ncsa.uiuc.edu>

National Center for Supercomputing Applications Home Page

<http://www.noaa.gov>

National Oceanic and Atmospheric Administration (NOAA) Home Page



<http://www.npac.syr.edu/textbook/kidsweb/reference.html>

References, including Acronyms; Dictionary; Thesaurus, On-Line Computing; Biographical Dictionary, Bartlett's Familiar Quotations, Area Codes, Zip Codes, and more.

[http://www.physics.mcgill.ca/physics\\_services/physics\\_services.html](http://www.physics.mcgill.ca/physics_services/physics_services.html)

Physics resources

<http://www.physics.sfsu.edu/asp/asp.html>

Astronomical Society of the Pacific

<http://www.sel.bldrdoc.gov/today.html>

Solar image for today

<http://www.seti-inst.edu/ed-top.html>

Educational resources

<http://www.sln.org>

Science site sponsored by Unisys Corporation, National Science Foundation, Franklin Institute, Boston Science Museum, Portland (Oregon) Museum of Science and Industry, San Francisco Exploratorium

<http://www.spacenews.com/>

Space News Online—excerpts; information from the newsweekly *Space News*

<http://www.stsci.edu/EPA/Recent.html>

Hubble Space Telescope Images

<http://www.stsci.edu/top.html>

Space Telescope Information Service

<http://www.timeblazers.com>

Site for kids: Astro bytes, games, information; educator/parent on-line forum; links

<http://www.w3.org/hypertext/DataSources/bySubject/astro/educational.html>

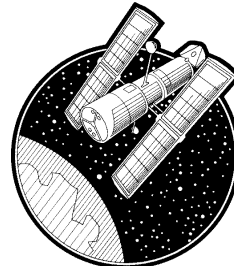
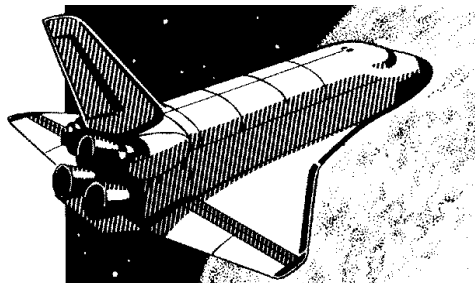
Educational resources

<http://www.wpafb.af.mil/cap/index.htm>

Aerospace lesson plans

<http://www.yac.org>

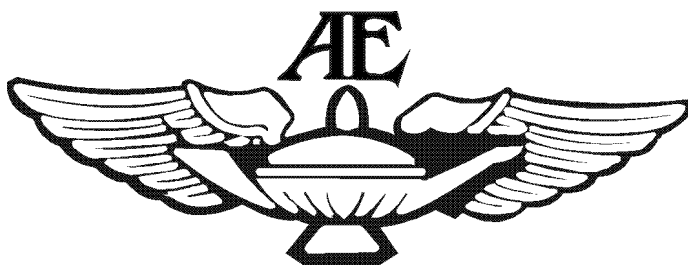
Young Astronaut Council



## REMEMBER:

Internet addresses can and do change. If an address does not work, use a search engine to help you locate the site. Bookmark sites you visit often, and keep your address list updated.

**Aerospace Education . . . .  
. . . . that branch of general  
education concerned with  
communicating knowledge, skills, and  
attitudes about aerospace activities  
and the total impact of air  
and space vehicles upon society.**



AEROSPACE  
EDUCATION

★ CADETS

★ TEACHERS

★ CHILDREN

★ SENIOR MEMBERS

★ CITIZENS OF AMERICA

\_\_\_\_\_

\_\_\_\_\_